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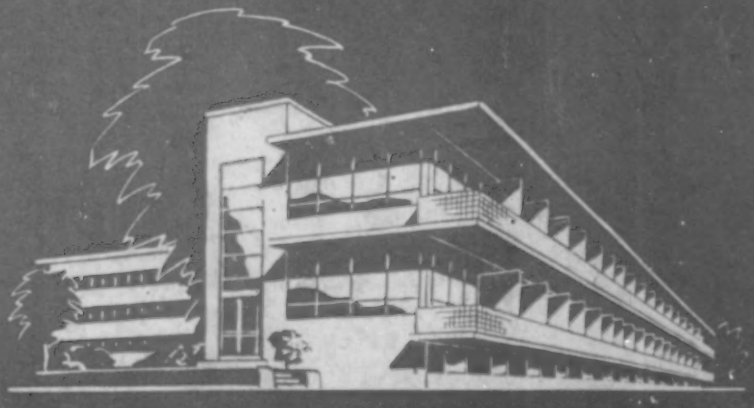
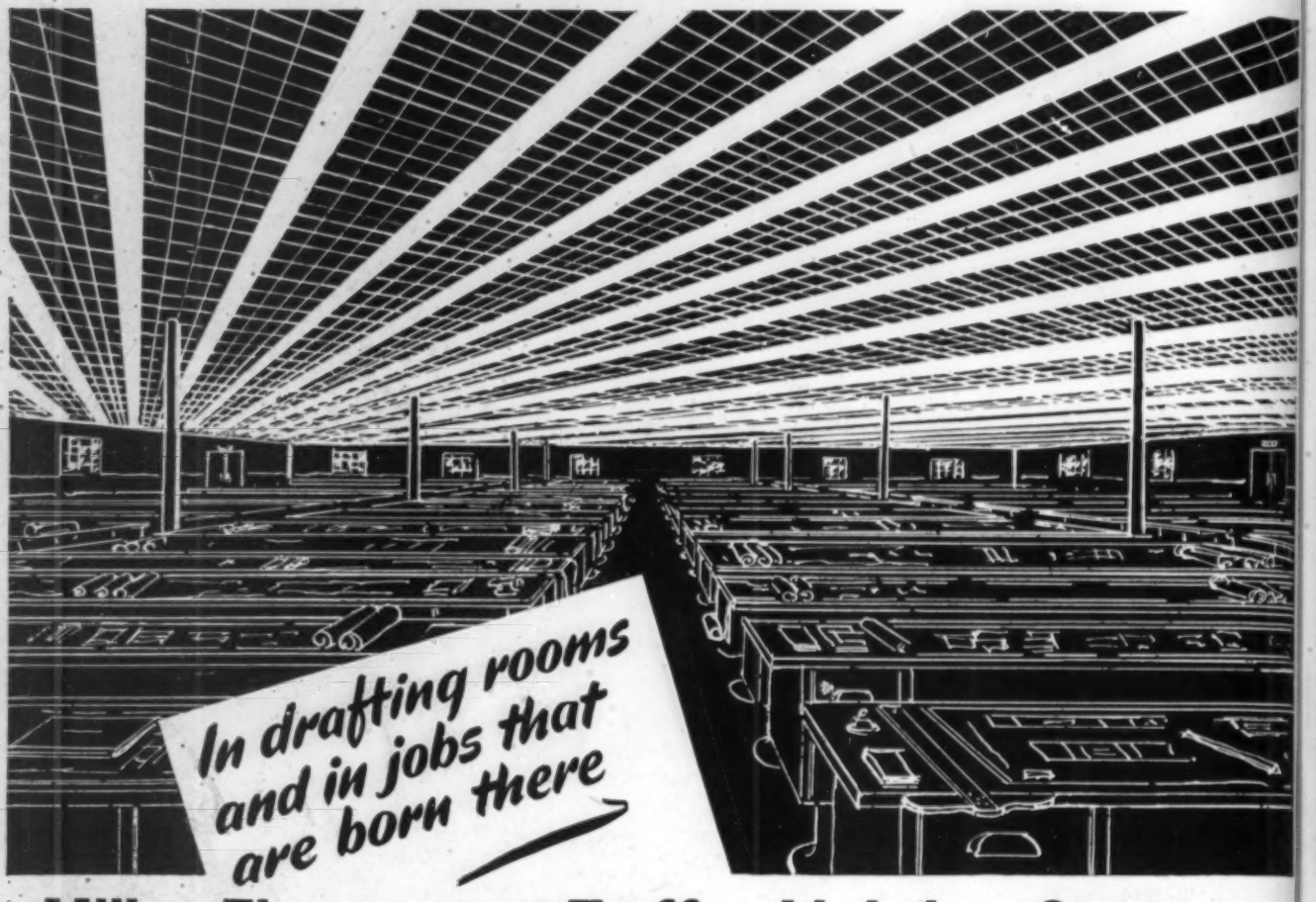


HOSPITALS • AUGUST 1945



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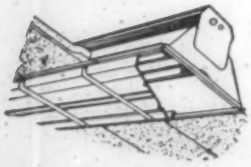

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ARCHITECTURAL

VOL. 98 • NO. 2 AUGUST • 1945

RECORD

COMBINED WITH AMERICAN ARCHITECT AND ARCHITECTURE

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Selecting FLUSH VALVES FOR HOSPITALS . . . .

Official U.S. Navy Photograph

• A recent survey among architects, widely experienced in hospital design, discloses a number of interesting trends in flush valve applications for hospitals. For example, there seems to be a trend toward the use of foot-operated combinations; there is a marked preference for *silent-action* flush valves. These trends and others are discussed in the booklet offered below.

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• Cook County School of Nursing, Chicago, Ill. Watrous Flush Valves throughout. County Architect: Eric E. Hall. Consulting Engineer: Willis J. Dean. Plumbing Contractor: E. J. Young & Co.

ARCHITECTS' VIEWS ON FLUSH VALVE APPLICATIONS

A survey of interesting trends in the selection of flush valves for postwar buildings is given in Bulletin No. 477—"How Architects Look at Flush Valve Applications". Write for your copy. See Sweet's Catalog for full information on Watrous Flush Valves.

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THE RECORD REPORTS

Materials Shortages Remain • Postwar Recommendations
Outlook for Building • Plant Construction Predictions
New Construction Division • OPA's Price Control Policy

Two conflicting forces now claim the attention of Washington officials charged with helping building men. On one side is the continuing hobble of material shortages, and related government controls, keeping operations at a minimum; on the other is the enormous, nation-wide construction backlog.

War agency men voice the heartening assurance that shortages and controls will fade soon and that 1946 will see a striking upsurge in building. But they see only a gradual, restricted outlook for the current year.

Relaxation of controls in the wake of V-E Day brought some stimulus for the July-September quarter. WPB's Construction Bureau anticipates a 10 to 20 per cent increase in construction volume. Further relaxations are on tap; in fact, John L. Haynes, Construction Bureau Director, predicts lifting of all construction curbs by the New Year. In the interim, items of "fringe essentiality," such as hospitals, will be given right of way. In one special case an additional 23,000,000 board feet of lumber was allotted for distribution to farmers for emergency maintenance and repair of dwellings during the third quarter.

But the shortages remain. No loosening of the lumber bottleneck can be pointed to with an accompanying wealth of supplies for building. Cast iron soil pipe looks bad. So do some other components, although perhaps in lesser degree. Even were these bottlenecks cleared up, the seasonal factor of fall shortly will begin to extend its shadow over the northern half of the country.

Postwar Recommendations

Recommendations on postwar public works and construction recently submitted to the House by its Special Committee on Postwar Economic Policy and Planning include several significant points. Note the following:

1. A Construction Policy Board should be established to guide policy for the nation's construction program. This Board should coordinate and supplement available information and research, should coordinate policy on scheduling and clearing of all federal projects, should arrange for close cooperation with state and local construction programs, and should advise with representatives of the construction industry. It should be set up within the Executive Office of the President to determine over-all policy at the top level.

2. The federal government should hold out no aid or promise of aid to states or municipalities for financing until the construction industry has had a chance to get back to normal peacetime production. There is no apparent need for such aid until the construction demands for business reconversion, for urgent housing, for public and private maintenance work, and for the expansion of enterprise to create new productive employment, have been met.

3. The federal government should be prepared to make advances later to state and local governments. It should encourage the planning of a shelf of useful public works.

Outlook for Building

"Reasoned estimates," says the Committee, "indicate that during the five years following the end of the war not less than $15 billion of new industrial plant and commercial construction will be required by American business. Over the same period private housing will need to be replenished at an average of about three-quarters of a million dwelling units per year. These figures represent construction demand, exclusive of deferred maintenance and repairs, both public and private, which together will average nearly $6 billion annually." (See table next page.)

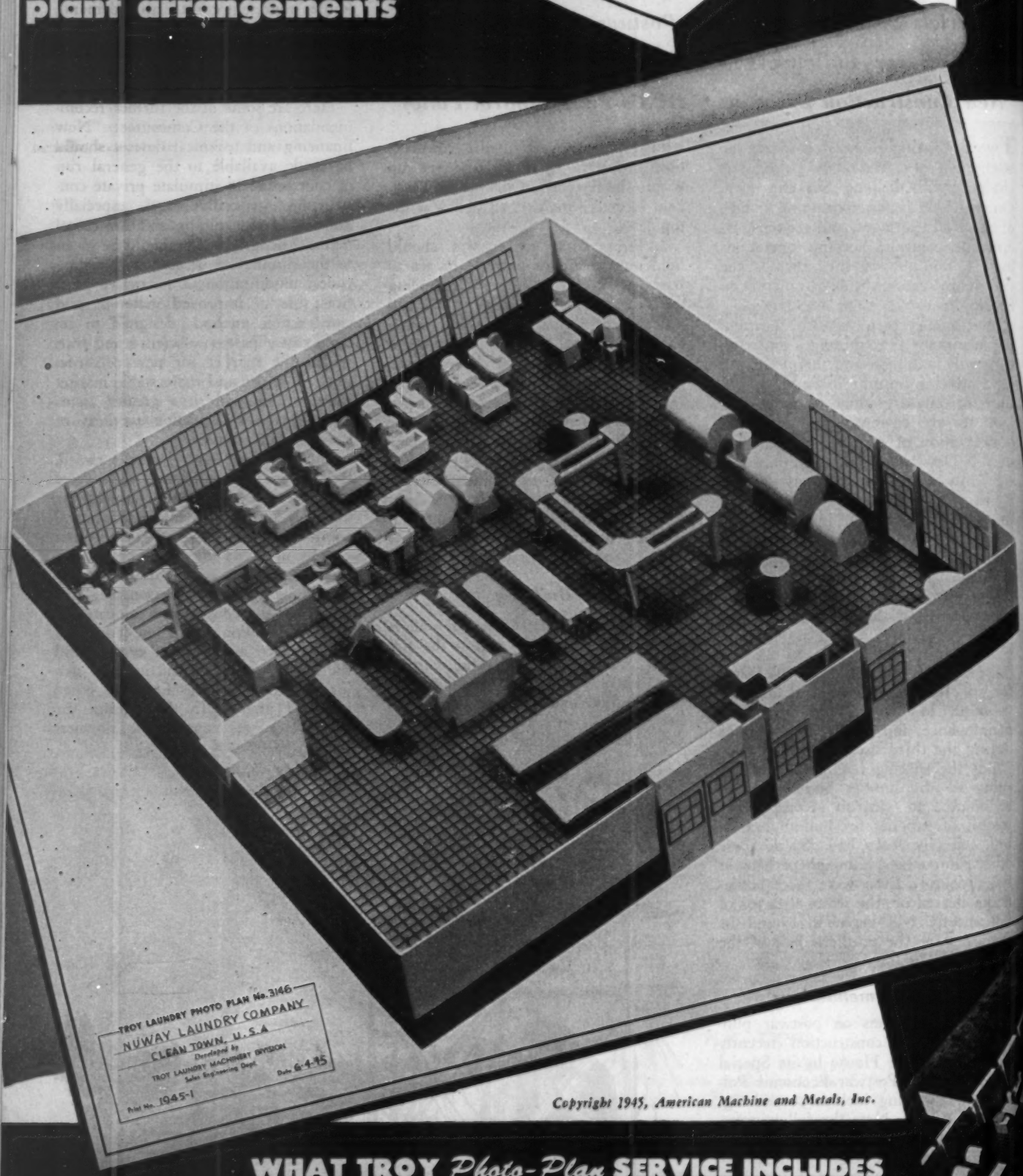
Here are some of the further recommendations of the Committee: "New financing and technical devices should be made available to the general run of contractors to stimulate private construction generally; and especially housing in the middle and low-rental fields. Encouragement should be given to the elimination of obsolete building codes; modification of restrictive practices; use of improved materials and construction methods designed to reduce costs, increase efficiency and thus widen the market for new construction. A wider and more stable market should carry with it a greater assurance to the construction workers of stable annual incomes."

Once the war with Japan is ended, the Committee anticipates that there will be a demand out-running the available supply of men, materials and completed plans. Once the supply has caught up with the more urgent demands, the aim of the public policy should be to keep a reasonable "plateau" for the construction industry of about $21 billion, about one-fourth for maintenance and current repairs and the rest for new construction and major alterations. (The figure is based on 1943 prices.) In the interim the Committee sees considerable slowness

(Continued on page 10)

"There's nothing like starting off with a clean slate, is there, Hans?"
—Drawn for the RECORD by Alan Dunn

For all shapes of floor plans and plant arrangements



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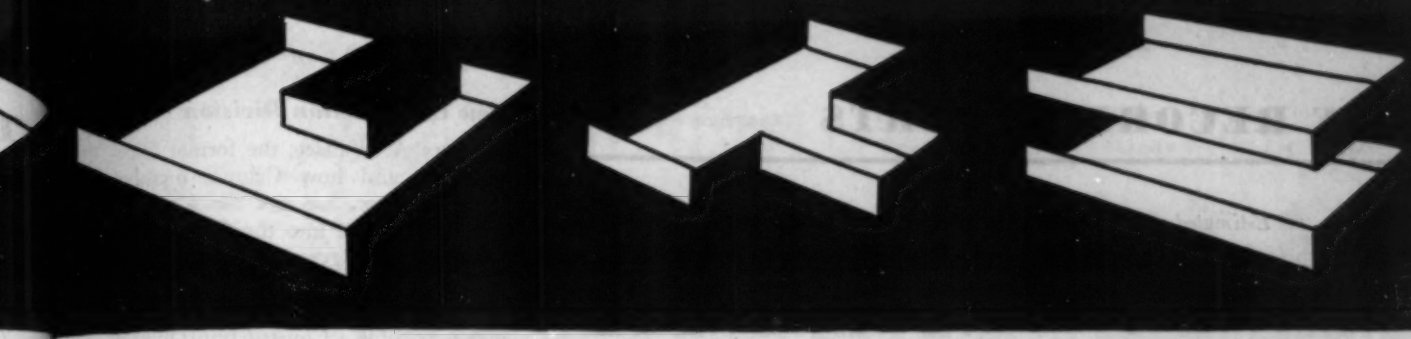

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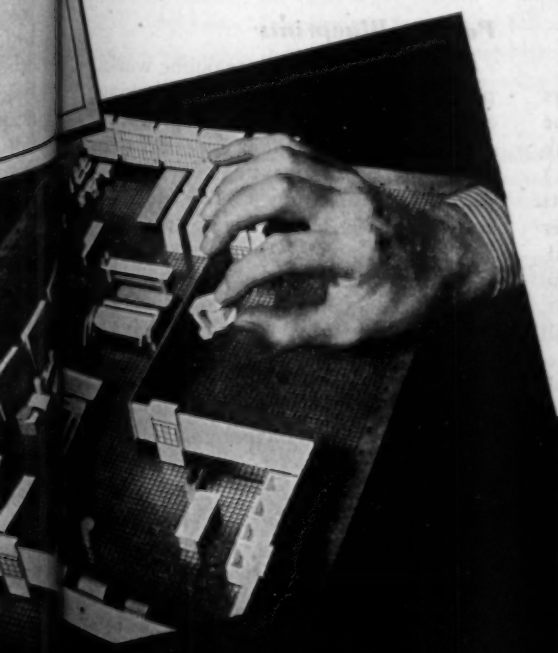
—War Production Board



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 (Continued from page 7)

Estimated construction activity during the first peace years [1]

(Assuming general high employment)

[In millions of dollars [2]]

	1946	1947	1948	1949	1950
Total, all construction	12,500	14,850	17,500	19,450	20,700
Private	9,200	10,800	12,300	13,650	14,350
Public	3,300	4,050	5,200	5,800	6,350
Total new construction	6,000	8,750	12,000	14,250	15,500
Private construction	4,000	6,000	8,000	9,550	10,250
(a) Residential, nonfarm	1,500	2,750	3,800	4,600	5,000
(b) Farm	325	375	450	475	500
(c) Commercial	320	490	750	1,000	1,000
(d) Industrial	775	900	950	950	975
(e) Institutional and miscellaneous	230	360	525	700	850
(f) Public utilities	850	1,125	1,525	1,825	1,925
Public construction	2,000	2,750	4,000	4,700	5,250
(g) Military and naval	125	75	50	50	50
(h) Housing	100	150	200	250	350
(i) Highways, airports, bridges, etc	800	1,225	1,900	2,200	2,300
(j) Nonresidential buildings	425	575	850	1,025	1,175
Institutional and administrative	375	550	825	1,000	1,150
Industrial and commercial	50	25	25	25	25
(k) Conservation, sewage, water, etc	550	725	1,000	1,175	1,375
Total maintenance and minor repairs	6,500	6,100	5,500	5,200	5,200
Private	5,200	4,800	4,300	4,100	4,100
Public	1,300	1,300	1,200	1,100	1,100

[1] Assuming VJ-day Dec. 31, 1945.
[2] Current dollars.

Source: New construction: Federal Works Agency. Maintenance and minor repairs: Bureau of Labor Statistics data adjusted to current price levels.

in construction pick-up. Among other factors, it cites the organization of manpower and facilities, transportation bottlenecks, and the natural time lag from the release of essential materials until they are actually in use.

It appears from the Committee's study that the construction industry can increase total new construction—from a level of about $6 billion at current prices in the first peace year—at the rate of $2½ to $3 billion per year over the first five postwar years. This would mean a total new construction, private and public, of close to $12 billion by the end of the second postwar year.

Plant Construction

As to the gigantic backlog of building, in addition to the housing indications presented in these columns previously, an estimate is now available of planned capital outlays by manufacturers for construction. Using direct inquiries to business as a base, the Department of Commerce finds that for the period from July 1, 1945 to June 30, 1946 manufacturers have plans for expenditure of roughly $1,350,000,000 for plants, or 30 per cent of an over-all outlay of $4,500,000,000 for plant, equipment and alterations. The amount for alterations is expected to run high due to reconversion needs.

As might be expected, the projected construction exceeds the prewar rate—it is roughly three times greater. Every industry group, says the Department, plans outlays well above the 1939 level. Development of new, war-stimulated products is listed as one of the causes, although wartime restrictions on normal construction have been the main factor in piling up the heavy backlog.

The Commerce Department warns, however, that these business plans are "in various stages of formulation" and cannot be considered a forecast, least of all a commitment. But they are helpful to the building industry as a "look-see" ahead.

Outlays by Industries

The study shows heaviest outlays planned by industry groups for the three items (plant, equipment and alterations) in the following order: (1) chemicals and allied products, products of petroleum and coal, and rubber products; (2) food and kindred products (including beverages) and tobacco; (3) transportation equipment, including automobiles; (4) textile-mill products and other fiber manufacturers, apparel and other finished products, and leather and leather products; (5) paper and allied products, and printing, publishing and allied industries; (6) machinery, including electrical; (7) iron and steel and their products; (8) stone, clay and glass products; (9) lumber and timber basic products, and furniture and finished lumber products; (10) non-ferrous metals and their products; (11) miscellaneous.

New Construction Division

Henry A. Wallace, the former Vice-President and now Cabinet member for Commerce, has got the Congress to let him move into the field of construction in a bigger, broader way. His request for funds to collect data on trends in the construction industry makes possible a Construction Division in the Bureau of Foreign and Domestic Commerce.

The new Division's program is outlined by Dr. Amos E. Taylor, director of the Bureau of Foreign and Domestic Commerce, in three main points as follows:

1. Rapid expansion of construction activities as the nation moves out of a wartime into a peacetime economy.

2. A higher postwar volume of activity in this field because of its importance in the business picture as a whole.

3. A more even flow of construction activities.

Dr. Taylor points to the need for estimating construction volume by types and by geographical location. Also needed, he says, are estimates of the physical quantity of materials to aid industry in determining markets and the availability of supplies, and to make possible the tracing of potential bottlenecks. He stresses one additional point, studies on the possibilities of the construction industry as a major outlet for investment.

In this connection, stress is laid by the Department on the preponderant role of small business in the construction field. On the basis of 1939 census figures, out of a total roughly of 215,000 establishments, about 87 per cent were reported doing business of less than $25,000 annually.

Postwar Blueprints

Blueprinting of postwar public works projects, with federal help, is moving ahead. The Federal Works Agency, in its first announcement of federal funds advanced, reported a total of 162 applications and approval of 36 for the sum of $1,004,443. This is from the $17,500,000 previously authorized by Congress for aid in postwar planning.

Projected facilities scattered through 13 states, include hospital, school, recreation, water, sewer and drainage; also street improvements, a municipal wholesale produce market, municipal building, and a municipal garage.

Price Controls

The future of prices and price controls on building materials is sketched in policies announced by OPA Administrator Chester Bowles. He makes this point clear: price controls on building materials will be among the last to

(Continued on page 12)

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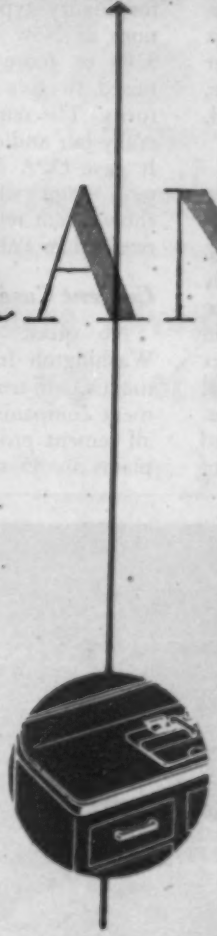

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THE RECORD REPORTS *(Continued from page 10)*

go. Deferred repairs and private plans for home building, he says, with the high level of wartime savings, will work to prevent early stabilization of supply and demand factors.

In general, OPA plans to end price controls on a selective basis. When supply and demand on any given item gradually equalize, the price ceilings will be temporarily suspended. If over a given period the prices remain stable, complete control will be relinquished.

Rent Ceilings

Rent controls will be removed increasingly this summer. However, Mr. Bowles advises that removal of the controls by areas is under continuous study and that OPA already has pulled out of some areas. In view of this, should it become impracticable to administer rent controls on a national scale, it will be up to the state and local governments to take over where continued control is necessary. The District of Columbia, for instance, has its own rent control act.

Rent ceilings recently have taken an upset in the United States Emergency Court of Appeals in the national capital. The court ruled, in a two-to-one decision, that present maximum rents for luxury type housing accommodations in New York City (renting for $100 or more per month) must be raised to give the owners higher returns. The rents have not proved generally fair and equitable, said the court. It gave OPA 30 days to raise ceilings to a point where the owners could show a rent return comparable to rents received in 1939.

Cement Case

No quick effects are foreseen in Washington from the Justice Department's anti-trust case against the cement companies. Although practically all cement production—more than 400 plants in 35 states — is covered, the course of the case through the courts is expected to be slow. Ultimately a ruling from the Supreme Court is counted on.

Wendell Berge, Assistant Attorney General in charge of the Anti-trust Division, advises that the government wants the Cement Institute dissolved; wants mills to quote prices and sell cement either f.o.b. mill or on a delivered-price basis, at the election of the purchaser; wants each mill to establish separately the same mill price for all buyers of the same class purchasing similar quantities, without reference either to destination point or use of the product; wants any mill to have the privilege of meeting the delivered price of any competing mill at any destination point by absorbing a part of the transportation cost, and wants no mill to charge a higher delivered price than the mill price plus the actual common carrier transportation cost.

The Anti-trust Division chief asserts, in this connection, that identical bids on cement were received on such large

(Continued on page 14)

General view of postwar Toledo according to Norman Bel Geddes' plan. Airport, almost in heart of city, has adjoining seaplane base, underground terminal building

To relieve traffic congestion: sunken highway running through center of city

TOLEDO LOOKS AHEAD

A postwar rebuilding scheme of gigantic proportions was introduced to the citizens of Toledo, Ohio when a 61-foot model of the redesigned city was put on display on July 4th.

The 47-section model forms the central feature of a civic rehabilitation exhibition organized by the Toledo Tomorrow Committee, a representative group of the city's government, business and education officials. The model, which cost $250,000 to build, is the work of Norman Bel Geddes & Co., industrial designers, in collaboration with Major Alexander de Seversky, aircraft engineer, Earle Andrews, highway authority, and the late Col. Henry N. Waite, railroad consultant. Geoffrey N. Lawford, architect, was in charge of the project.

Chief features of the model are a central air, rail and bus terminal in the heart of the city, consolidated freight and marshalling yards, and an express highway system to eliminate motor traffic congestion. Most buildings in the business district are limited to three stories in height as a further means of preventing traffic congestion, and the entire district is surrounded by parks and residential communities. Some of the express highways are underground, as are the railroad approaches to the central terminal. There is a separate cargo airport.

Of particular interest is the location of the airport only five minutes from the center of the city. The airport itself is of the most modern design, with an adjoining seaplane base, an underground terminal building, and provisions for jet-propelled planes in the runway lengths of 5700 feet.

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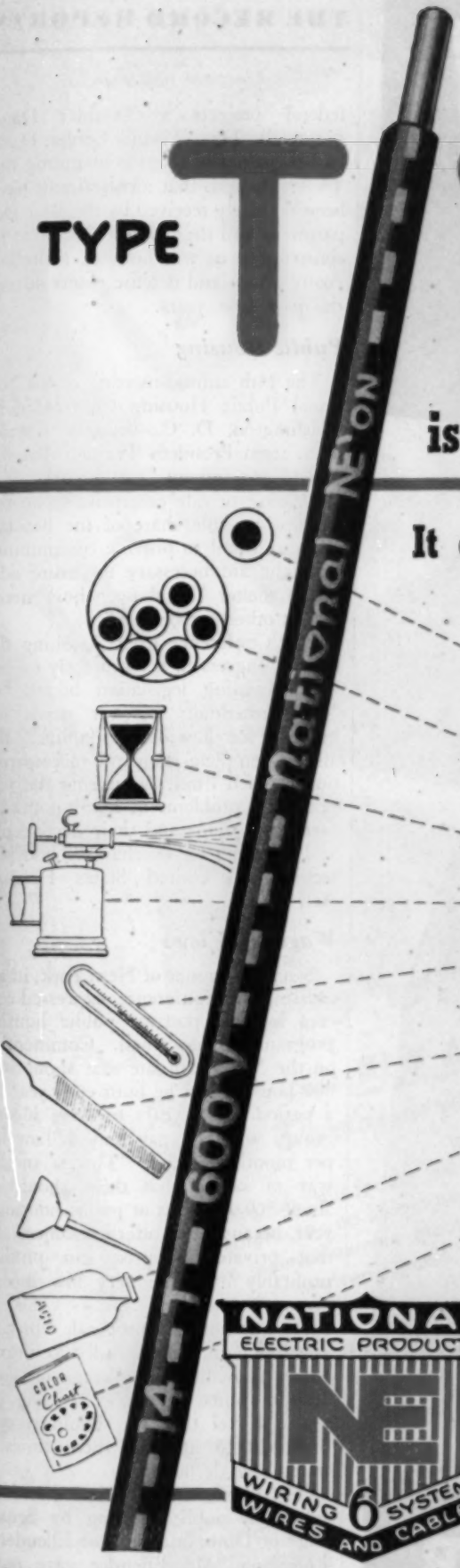

It offers these advantages over other types of electrical wiring:

- Superior dielectric properties, permitting minimum diameters.
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- Better aging properties.
- Exceptional flame resistance.
- Approved for operating temperatures up to 60°C (140°F).
- Abrasion resistant—fibrous coverings unnecessary.
- High resistance to most acids and alkalies, alcohol, gasoline, oils and greases.
- Wide color range for easy identification. Permanent colors.

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WIRING SYSTEMS 6
WIRES AND CABLES

Available in all standard sizes up to 2,000,000 CM. Sizes 14 to 4/0 are approved by Underwriters' Laboratories. And for unusually moist locations, specify National Electric Type TW. Engineering data on request.

National Electric
PRODUCTS CORPORATION
Pittsburgh 22, Pa.

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THE RECORD REPORTS

(Continued from page 12)

federal projects as Boulder Dam, Bonneville Dam, Grand Coulee Dam, and the series of dams constituting the TVA. He adds that identical bids have been regularly received by the War Department and the Navy Department in construction of war projects, including Army camps and defense plants during the past four years.

Public Housing

The 14th annual meeting of the National Public Housing Conference in Washington, D. C., brought a statement from President Truman that the federal government "has the obligation of helping private enterprise to do the greatest possible share of the housing job ahead and to provide communities with the aid necessary to insure adequate shelter for those whose needs cannot otherwise be met."

The Conference itself is asking the U. S. Congress to act promptly on national housing legislation because of "the tremendous postwar needs for housing for low-income families, the almost complete standstill in construction of such dwellings during the war years, the problems of housing the returning veterans and their dependents, and the need for overhauling and perfecting the United States Housing Act."

Wagner's Views

Senator Wagner of New York, in addressing the Conference, expressed concern lest the postwar public housing program be too small. Commenting on the NHA estimate that about 360,000 houses must be built each year for a period of 10 years to serve income groups who can pay only $20 or less per month, he said: "This is another way of saying that there should be about 360,000 units of public housing a year, because it is utterly inconceivable that private enterprise can produce profitably for these very low income groups."

He questioned a proposal, which he said had been recommended to him for study, providing an average of about 100,000 units of public housing per year. "I feel that we should commit ourselves to at least three times as much," he declared.

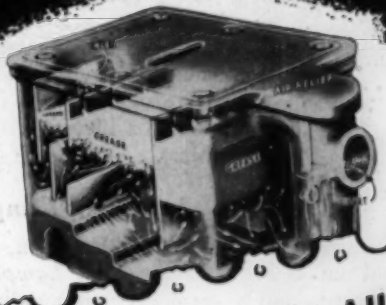
The Conference also heard endorsements of public housing by Senator Taft of Ohio, and Senator Ellender of Louisiana. Mr. Ellender gave notice that he would seek to place farm housing in an over-all agency with "the Department of Agriculture extending cooperative advice."

(Continued on page 138)

GREASE INTERCEPTION

Josam

MANUAL A



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FOR BETTER BUILDING

Fluorescent desk lamp with swivel arms, one of the Lighting Center's features

LIGHTING CENTER

Fluorescent lighting especially designed for the home is on display in a new Lighting Center opened last month by Sylvania Electric Products Inc., at 500 Fifth Ave., New York City.

Consisting of a suite of living room, bedroom, study, kitchen and bath, the center is the result of months of research by company engineers, stylists and architects, working with Lurelle Guild, design consultant. The rooms are fully furnished, and will serve as a laboratory for experimenting with new residential lighting ideas developed by Sylvania.

Both fluorescent and incandescent light sources are used in the living room and bedroom of the center. Fluorescent lamps concealed behind the window valence in the living room make a focal point of the window by highlighting the draperies, and a decorative fluorescent ceiling fixture supplies general illumination over the entire room. Portable incandescent lamps are placed beside each seating unit to furnish extra light for close work. General illumination in the studio bedroom comes from fluorescent lamps enclosed in a lacy ceiling fixture, concealed behind the window valence and placed above the bookcase.

Continuous strips of fluorescent lamps have been mounted on the ceiling over the work surfaces in the kitchen. The unit follows the contour of the surfaces, with light coming down on the areas where food is prepared. The room is virtually shadowless.

Fluorescent lamps and fixtures are used exclusively in the bathroom: a ceiling fixture, and lamps on either side of the mirror.

SUSPENSION HEATER

A new, compact, heat-producing and distributing unit, the *Dravo Direct Fired Heater*, burns either gas or oil and is designed especially for suspension from walls or roof trusses where space for the conventional floor units is not available.

Warm air from the heater can be discharged in any direction by regulating the adjustment of the nozzles. There are directional louvers on each nozzle to channel the flow up or down. The hot air is driven from the adjustable nozzles at velocities of 1800 to 2000 ft. per minute, enabling the heaters to be located from roof trusses or wall brackets 30 or more ft. above the floor and still deliver their heat load efficiently to the working area. Btu. output per hour capacities range from 300,000 to 1,650,000 depending on size of heater.

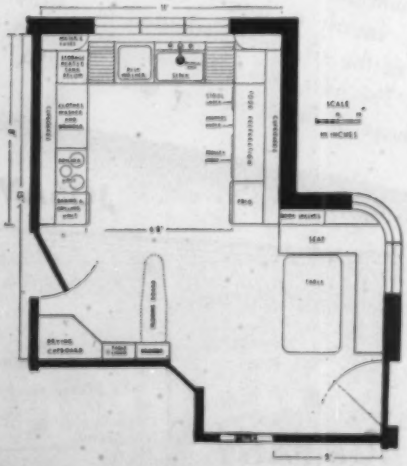
Heaters are shipped from the factory complete with the refractory lining and all wiring in place. Dravo Corp., Pittsburgh 22, Pa.

ALUMINUM KITCHEN

From England comes news of an all electric kitchen in aluminum, now on exhibition in London.

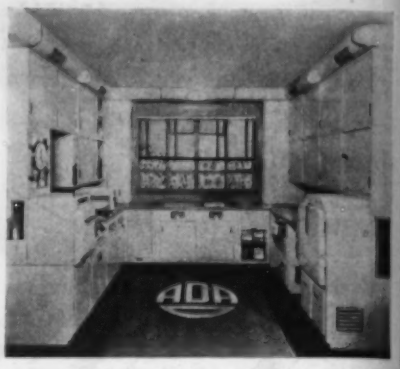
Especially designed for the Aluminium Development Association of Birmingham by Ernest R. Gilbert, the kitchen is planned on the unit principle. It incorporates a dining alcove and full laundry facilities including an electric clothes washer and an electrically heated drying cupboard, and is electrically ventilated.

The electric stove is separated into two units, with the oven—thermostatically and time controlled—at a convenient height above floor level. Dish washer and refrigerator also are electric, and there is a garbage disposal unit in the sink.



Floor plan of A.D.A.'s aluminum kitchen

The generous number of wall cabinets are of all aluminum construction, with sliding doors and adjustable shelves. The work bench is glass topped. Two deep ventilated aluminum drawers are provided below the refrigerator for storage of fresh vegetables.



The A.D.A. kitchen is compact, modern

LIGHTING

Commercial Incandescents

Incandescent lamps rated from 150 to 1500 watts in eight sizes and three types are now available for commercial and industrial lighting. All wattage sizes are available in clear; inside frosted types are supplied in 300 watt and larger sizes. All lamps are supplied for use on 115, 120 or 125 volt circuits. Sylvania Electric Products, Inc., Salem, Mass.

Black Light Lamps

Recently announced is a new line of *Black Light Lamps* said to provide near ultraviolet radiation in the region of 3650 Angstrom units.

According to the manufacturer, the light source is the Mazda fluorescent lamp to which is processed a special plastic filter that absorbs unwanted visible light, yet permits the passage of near ultraviolet light.

The black light lamps operate with standard fluorescent equipment. Vio-Ray Mfg. Co., 5022 N. Kedzie Ave., Chicago 25, Ill.

Twin Raceways

Ample and accessible facilities for light, power and telephone have been worked out in a twin raceway baseboard design. The steel raceways are erected under the plaster and act as a rigid support for it, preventing later cracking. The closure is of wood, attached by means of metal clips at any spacing desired. Other closures such as rubber tile, ceramic or asphalt tile or linoleum may be used.

All metal fronts are 10 ft. in length and have duplex knockouts on 40-in.

(Continued on page 22)

The chief is no different from the thousands of men all over the globe who never met electricity until the demands of war brought Laytex-insulated Wire to their backyards.

These new friends of Laytex see this wire perform in freezing weather, in moist jungle heat,—and under the shock and impact of battle. No wire was ever meant to withstand such tough wear, yet Laytex comes through again and again.

Laytex Wires and Cables are at present supplying only military needs. One day Laytex will again be ready to fill a long list of civilian needs...Buildings, Police and Fire Alarms, Communications, Signalling, Power, Control, and many more.

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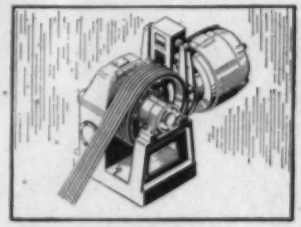
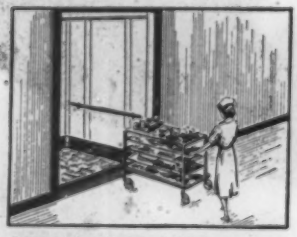
Designed for the Smaller Hospital

TO SEE THE ELEVATOR OF TOMORROW . . .
LOOK AT SEDGWICK HOSPITAL ELEVATORS TODAY

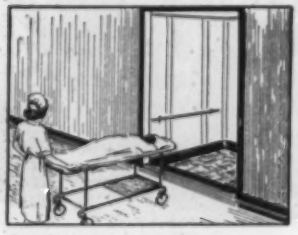
Modern design inside and outside. Sedgwick elevators become an integral part of the hospital.



Precision-engineered Sedgwick elevator machines are specially designed for hospital elevator service.



Sedgwick Hospital Elevators are ruggedly constructed to do many essential jobs.



Comfortably proportioned to accommodate stretchers, visitors or hospital personnel.

The *new* Sedgwick Electric Hospital Elevators are expressly designed for use in hospitals up to six floors where car speeds up to 150 feet per minute are required.

These multi-use Sedgwick elevators are made with three types of control. *One*—The Sedgwick simple, straight automatic push button control with dispatching buttons in the car for each landing and a call button at each opening, for operation without an operator or attendant. *Two*—Sedgwick's self-centering, manually operated lever-type car switch for those elevators to be run by an operator. *And three*—Sedgwick dual control which offers all the advantages of automatic floor stops and permits operation of the elevator with or without an operator by simply flicking a switch.

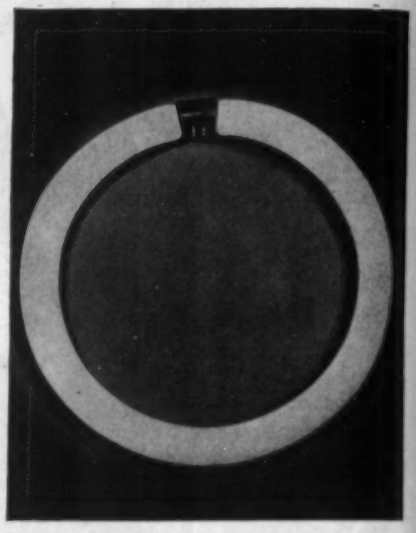
These are some of the advantages of Sedgwick Multi-Use Electric Elevators for smaller hospitals. There are many more. We would like to tell you about them. So if you have a perplexing lifting problem—present or postwar—tell us about it. Our engineers will be happy to help and show you how Sedgwick elevators solve smaller hospital vertical transportation problems through safer, surer, more economical operation.

Sedgwick MACHINE WORKS

142 West 15th Street, New York 11, N. Y.

(Continued from page 20)

centers (standard) but can be at any specified interval. No cast or factory built corners are necessary—inside and outside corners can be mitered on the job. The slip-on, slip-off feature of the front panels, with no splicing plates or screws to bother with is of advantage when there is need for expanding or repairing of the systems. Charles E. Barnes & Son, 4320 Osage Ave., Philadelphia 4, Pa.



A plastic base joins circline's ends

Plastic Bases

A four-pin plastic base has been developed to join the ends of the *circline fluorescent tube*, three sizes of which will be offered as soon as conditions permit. The base, about 1 in. in diameter, contains two pins from each of the two connecting ends of the lamp. For convenience in installation, particularly when nesting with the 16-in. and 8½-in. circline, the pins are mounted at a 45° angle to the plane of the circle. Westinghouse Lamp Division, Bloomfield, N. J.

Instant Start Transformer

A new instant start fluorescent lighting transformer entirely eliminates the preheating starter as well as the starter socket and compensator. It starts the lamp at lower line voltage than required by conventional ballast and reduces stroboscopic effect to a low minimum.

Operating on a standard 110-125 volt A.C. lighting circuit, at cold start, it applies 450 volts to the lamp, striking an arc between the lamp cathodes, thus eliminating the troublesome separate starter action or cold cathode preheating. Housed in a new type case. Guar-

(Continued on page 24)

HOSPITALS stay modern with SNEAD MOBILWALLS

Change is as inevitable in hospitals as in the science of medicine. Snead Mobilwalls enable a hospital to keep pace with the ever-changing needs of the times, quickly, easily, and inexpensively.

Snead Mobilwalls are the outstanding movable steel wall for modern hospital interiors. They combine the privacy, permanent appearance, and soundproofness of fixed masonry walls with instant mobility, flexibility, low upkeep, and complete reusability of parts.

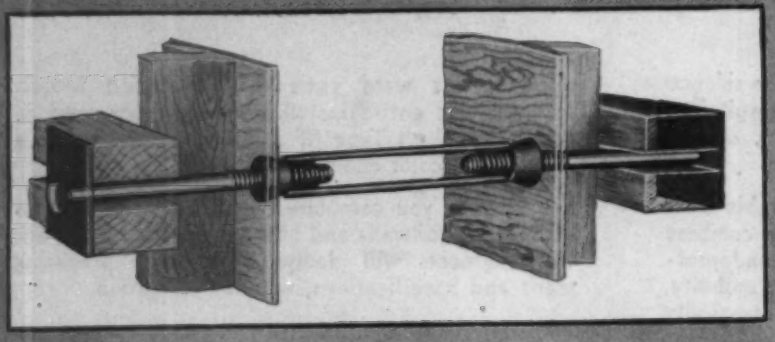
The Memorial Hospital, New York City, provides a significant example of the value of flexible interiors. This modern hospital for the treatment of cancer is equipped throughout with Snead Mobilwalls. The medical and business staffs operate in complete privacy and quiet with easily rearranged flush steel Mobilwalls. This extreme flexibility has already served the hospital many times when rearrangements had to be effected overnight. Small clinic operating rooms, dressing rooms, and examination rooms are of similar construction. Semi-privacy is obtained for ward patients with Snead Mobilscreens. The entire installation was made with 3-inch thick flush Type RF Mobilwalls, finished in a light cream color enamel.

Let us send you complete details and photographs of Snead Mobilwalls and Mobilscreens for hospitals. Our engineers will gladly cooperate in preparing plans and specifications, without obligation.

Since 1849, the Snead symbol of lasting beauty, quality and progress in metal construction

MEMORIAL HOSPITAL
New York
JAMES GAMBLE ROGERS, *Architect*
VERMILYA BROWN & CO., *Builders*

RICHMOND TYSCRUS
SPEED HEAVY CONCRETE WALL FORM CONSTRUCTION



Richmond Tyscrus are—

- High strength, light weight, form-tying devices with a range of sizes from 6,000 lbs. to 30,000 lbs. per tie safe load rating.
- Equally adaptable to plumb and battered wall construction. Use of Tycones to spread form work for required wall thickness is optional.
- Easily assembled by workmen as all of the threaded members have coarse, fast acting, self-locking threads.

Forms strip easily leaving a clean wall surface when Richmond Tyscrus are used. The bolts (Tylags) do not bind. Embedded Tyscru Coils can be used for convenient form reanchorage or scaffold support.

RICHMOND OFFERS—without obligation, consultation on best of ties and details of application to your form work; estimates on job requirements and recommendations on specific form problems.

RICHMOND WORKING PARTS—reusable accessories for Tyscrus including Tylags, Tycones and Flat Washers are furnished.

RETURNABLE FOR FULL CREDIT
—no rentals charged.

Form-Ty Engineering Guide on Request

SEE OUR CATALOG IN SWEET'S

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816 LIBERTY AVENUE, BROOKLYN, N. Y.
MANUFACTURING SINCE 1911

TIME AND LABOR SAVING CONSTRUCTION DEVICES FOR CONCRETE CONSTRUCTION

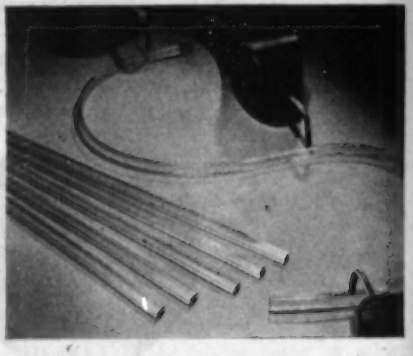
FOR BETTER BUILDING

(Continued from page 22)

anteed for 12 months to be free from defective material or faulty workmanship. Approved by Underwriters Laboratories. The Rogers Industries, Inc., 270 Lafayette St., New York 12, N. Y.

Germ Barrier

A new *Barrier Fixture* for use with germicidal lamps makes it possible to curtain off an entire area against outside germs. Uses suggested by the manufacturer include: (1) to form a curtain of ultraviolet between clerk and clientele, reducing cross-infections; (2) to concentrate a narrow beam of ultraviolet on bottles in milk, beer and soft-drink industries, to retain sterility; (3) to form a germ-killing curtain to prevent germs from passing between reception rooms to consultation rooms in doctors' offices. The Edwin F. Guth Co., 2615 Washington Ave., St. Louis 3, Mo.



Splines extruded of transparent Tenite

TENITE SPLINES

Draftsmen's splines extruded of transparent Tenite are said to be uniformly flexible and resilient, and may be made to take any desired curvature. H-shaped in profile, they are held in place by means of metal "dogs" which are hooked into the channels thus formed. Because of a high degree of dimensional stability, Tenite is extruded to very close tolerances, and an even edge is maintained.

The splines are extruded by Yardley Plastics Co., Columbus, Ohio. The Tenite used is a cellulose acetate butyrate product manufactured by Tennessee Eastman Corp., Kingsport, Tenn.

ROOF COATING

To prevent the damaging effects of the hot summer sun on an asphalt roof, and yet to give the roof the protection of asphalt, a new coating called *Hornlume* combines practically pure metallic aluminum with asphalt to reflect the

(Continued on page 152)

Assurance

A FINISHED PRODUCT reflects the degree of assurance with which the original planning was undertaken. Proper tools help to provide this assurance . . . drawing pencils for example, that assure accuracy of detail, perfect rendering and reproduction.

VENUS Drawing Pencils are engineered to give you drafting perfection without failure: accurately *graded* to assure uniformity in all 17 degrees . . . *strong* in performance . . . *smooth* and *clean* in action.

VENUS *DRAWING PENCILS*

AMERICAN LEAD PENCIL COMPANY, HOBOKEN, NEW JERSEY

Unlike surface finishes, Seal-O-San sinks in ...fills and seals every open joint and cell

THE architect who specifies Penetrating Seal-O-San for hospital floors wins the gratitude of everyone charged with efficient hospital management. For Seal-O-San not only keeps the surface clean, it makes certain that every wood cell *below the surface* remains clean.

A Seal-O-San finish becomes part of the wood. Penetrating deep, the liquid fills the empty cells, eliminating the *hidden* sources of dirt. Sealing the cells, it forms a protective finish that actually reinforces surface fibres. Thus, a Seal-O-San finished floor is covered with a *wear-resisting* seal that locks out dirt or moisture. As a result, stains and dust are *easily* removed. Costly scrubbing is seldom necessary.

Moreover, the tougher Seal-O-San finish keeps dirt from piercing the surface and getting a foothold. It puts an end to cracks and crevices that harbor germs or dirt. That's why a Seal-O-San floor *stays clean* longer . . . why maintenance becomes simple and inexpensive.

Unlike hard, brittle, surface finishes, Seal-O-San will not chip, crack, or peel. Consequently, Seal-O-San has convinced hundreds of hospital administrators that it will not break down where traffic is heaviest.

Seal-O-San leaves a beautiful, soft-lustre, natural finish—as smooth and polished as a fine piece of furniture. And the ease of application—with a lambswool mop—brings worthwhile labor savings.

Your insistence on *beauty, cleanliness* and *simple maintenance* for hospital floors will inevitably lead you to Seal-O-San. Why not write for specifications and details—*today!*

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SEAL-O-SAN

PERFECT SEAL AND FINISH FOR WOOD FLOORS

LETTERS

RECORD:

A whole blanket of orchids ought to go to you for Dean Hudnut's article on "The Post-Modern House."

This is the most sensible presentation on the subject I have ever read. I am making it an assigned reading for everybody here on the staff.

Faithfully yours,

Richardson Wright
Editor-in-Chief,
House & Garden

RECORD:

I feel I must comment on Dean Hudnut's article on the design of the Post-Modern House in the May issue, —largely because he takes a crack at the family living studies which I initiated when I directed the Pierce Foundation housing research. I might even say that it was the attitude which he presents in this article which compelled me to start the program to find out what contemporary family living is, and what its space needs are. Too much emphasis on the "art" of beautiful architecture, narrows down the number of people who can enjoy it, and leaves the family out in the cold. . . .

Dean Hudnut's main difficulty seems to be that he wants more than an engineered house, *before there is an engineered house*. He disdains the tools of science whether they be facts on how far plywood will bend before breaking, or how many clothes must be provided for in closet space. These tools are necessary to the architect be he artist or technician, if he is to provide the best possible solution.

Granted that it is entirely possible to design a house to fit the family which might not be beautiful to Dean Hudnut; it is even more possible to design a work of art full of "rhythms, proportions, radiance" which would be a thing of beauty to every passerby and a pain in the neck to the family living in it. Let's have the engineered house first. Surely that won't stop the architect from making it beautiful.

The funny thing is that both Dean Hudnut and I want the same thing. It's just that in writing he feels the need to emphasize art to counteract over-emphasis on science, and I feel the need of emphasizing science to counteract over-emphasis on art. . . .

Very sincerely,

Robert L. Davison

RECORD:

For a long time I have had the feeling that the attitude of the professional press was drifting further from my own, in the matter of the dwelling. For

(Continued on page 28)

ALUNDUM Aggregate was specified for the terrazzo floors in Rockefeller Center because it assures non-slip effectiveness, wet or dry, and wear resistance where traffic is most severe. Both the slip-proof and wearability features of ALUNDUM Aggregate are extending the use of terrazzo to floors, stairs and ramps. For many buildings, and particularly for stairs, terrazzo in the form of pre-cast tiles and treads is preferred to terrazzo poured plastic. Here again the addition of ALUNDUM Aggregate will guarantee a non-slip, long-wearing surface.

NORTON COMPANY
WORCESTER 6, MASSACHUSETTS

NORTON *non slip* ALUNDUM FLOORS

PORTLAND-CEMENT PAINT

for beauty and utility!

• **Noted for *beauty*** as well as for *utility*, portland-cement paint, made with Atlas White cement, both wreathes a building in a smile and penetrates the pores of masonry. It enriches color and seals out weather.

• **An inviting adornment of a surface,** it also offers stout resistance to dirt and dust . . . cleans easily . . . saves frequent repaintings.

• **As easy to look at as it is to apply,** its base of Atlas White cement insures clear, true tones. It is made, not by us, but by cement-paint manufacturers; and comes in handy packages all ready to mix with ordinary tap-water on the job.

Write for further information.
Address Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N.Y.

Factory-prepared paint is preferable
See your local paint dealer

ARP

ATLAS WHITE CEMENT
FOR PORTLAND-CEMENT PAINT

LETTERS

(Continued from page 26)

this reason it is a great pleasure to find on the part of such a man as Dean Hudnut, the same important values, re-affirmed and stated in terms of the present, but basically unchanged.

The one-family house is a frame for the family, a unit in our society still valid, still true, and it's nice to hear again that esthetics can be considered at least by some of us without our being considered hopelessly out moded.

Sincerely,
Harris Armstrong

RECORD:

Hudnut at his best, is without par in our professional literature. It is a keen pleasure to see him ride out the gale of pseudo-scientific jargon, or prick soap bubbles.

Sincerely,
Paul P. Cret

RECORD:

We read that in the great ages of Culture of times gone by, the Ruler employed as Architect one so versed in philosophy, in the meaning of life and its purpose, in the arts and sciences, and amenities of life, as to be able to lay out cities, design temples and market places in a way to guide the people to wise and virtuous living. Those were not days of wild experimentation when every Tom, Dick and Harry had the right to build what he pleased, or when the soldier on the other side of the planet sent home blueprints of his heart's desire in less time than it takes to walk from the Bronx to the Battery.

As Dean Hudnut suggests, today *IS* the day of Science and Engineering. Accept it. Every dog has his day. The Scientist and Engineers are those who are having a good time. It is natural enough that some architects be drawn in their wake, that all architects to a measure and with humor, join the happy throng. Today we analyze and we calculate, we graph and we cerebrate how to pack the masses economically.

Architects, however, belong to different categories. There are architects who, like the common man, live in the immediate and temporal world (all men could be measured by their consciousness of time), who pin new hopes on each new discovery, new form, new method; there are others. Nature wills these periods of high hopes in the new and miraculous, of lyric delight and belief in a new world. They are an indispensable part of life. They bury the old rubbish, they scratch the surface of

(Continued on page 156)

Expanding the Fields of Service

✦ As one architect put it, "I never thought I'd have to turn down desirable clients, but it's a fact. I will not take more work than I can handle efficiently and the manpower for the office just isn't available now. I'll take more work when I can get the necessary men." It's the same complaint from most sections of the country—not enough draftsmen. But throughout the land architectural and engineering firms are re-forming for the future. Soon men will be coming back, fitting in, starting new firms, laying new plans for more effective service. And they will find their places in the expanding profession.

✦ Most such plans involve an analysis of the types of service that are and will be needed, and by whom, and then the considerations of how to organize to render the needed services on a business basis as well as a professionally competent basis. Each man and each office has to do this for himself or for itself. But there is one definite trend—expansion; expansion to integrate services, to offer more complete and comprehensive service, whether in a specialized field or in more extensive fields. New firms are being formed and old firms augmented to bring together talents and knowledge that are complementary to form a team or group having various abilities and experience and covering effectively each of the many functions of complete architectural service. The object is to offer the kind of service that will meet the needs and demands of modern clients, that will help such clients in every phase of their building problem. This may start with the economic analysis, determination of requirements (actual and potential), site selection and financing, and carry through planning, design, construction and equipment to merchandising and management. This is not new; successful offices have in the past rendered such complete services, or the major part of them, but the trend is in the direction of organizing more definitely a team of balanced talents covering a wider range of service.

✦ Naturally there will be many kinds and sizes of offices, each to fill the needs of certain localities and types of clients. There will be expansion in the number of firms from now on as men return from military service or war industries.

✦ There is another important expansion developing for the profession. This expansion will be one of broadened spheres of activity as well as integrated architectural-engineering service. The field of so-called industrial design or product design may well be added to the firm's activity in building or community design. During the war the talents of many architects have been devoted with such success to the development of mechanical and electrical products for war purposes that such men will continue to serve industry by the designing of peacetime products.

✦ In planning for expanded activity, either in general practice or in specialization, the wisest of the new or realigned offices are maintaining their flexibility while adding to their versatility. The practice of the profession will no longer be narrow and circumscribed but is branching out to render service wherever the peculiar talent of analysis, synthesis and creative imagination of the designer are needed. The era of expanded architectural-engineering service is at hand and the return to peacetime production should find the profession ready for the task, organized as never before for creative service in wider fields.

Kenneth K. Stowell

EDITOR

THE NEW TRIPLER GENERAL HOSPITAL

Island of Oahu, T. H.

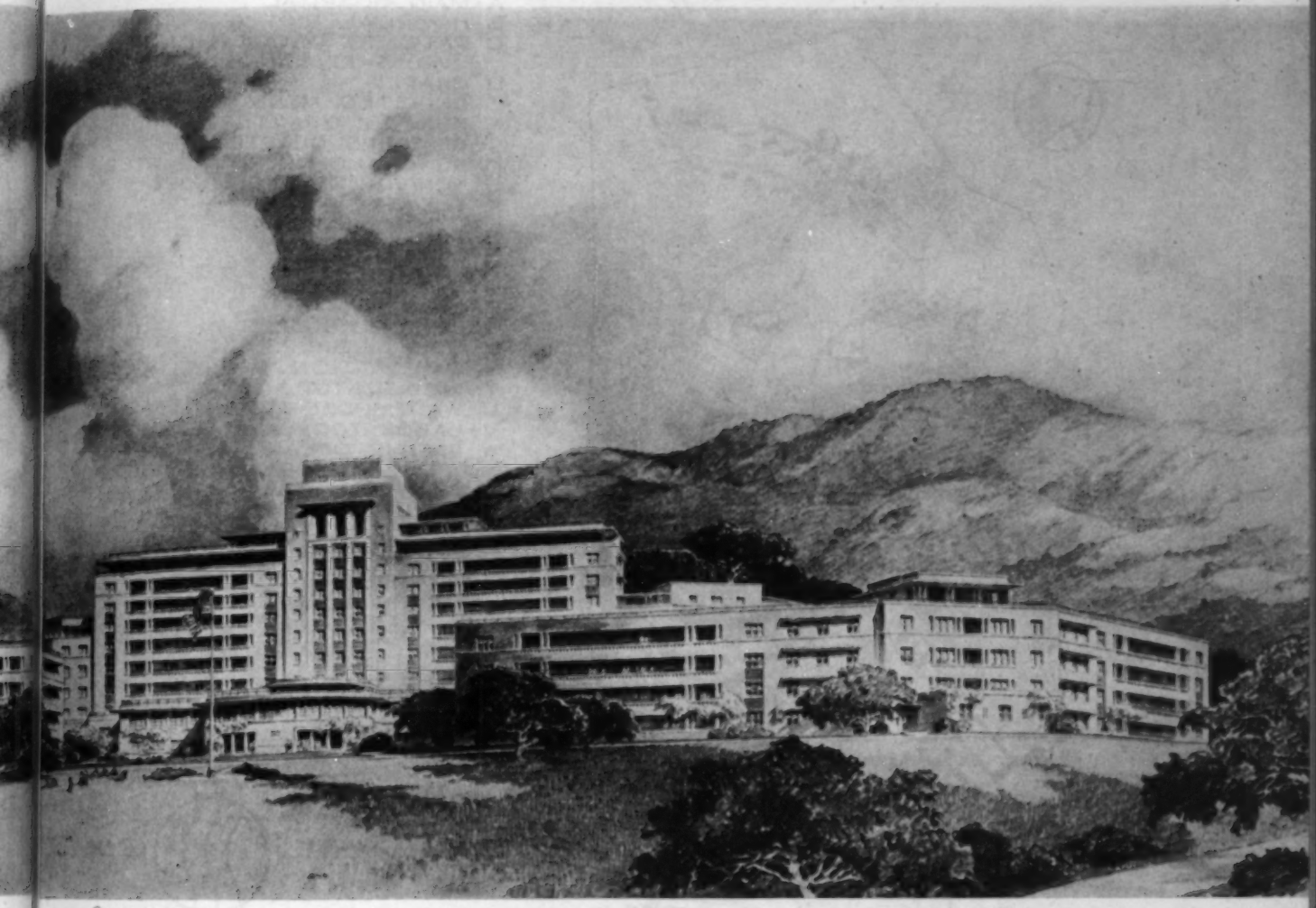
Medical Department,
United States Army

Corps of Engineers, United States Army

York and Sawyer
Architect-Engineer-Manager

THE Tripler General Hospital, now under construction near Honolulu, Hawaii, is designed as a permanent hospital to serve the personnel of the United States Army stationed in the Pacific Ocean Area. It will be a self-contained group comprising a main hospital building with a capacity of 1500 beds and provision for future expansion to 2000 beds, quarters for officers, nurses, and enlisted personnel, a patients' recreation and post exchange building, gymnasium, theater, chapel, medical research laboratory and complete service facilities.

The hospital wings are oriented to receive maximum benefit from sunlight and prevailing trade winds, and on the lee sides of wards generous protected lanais or balconies are provided, having unobstructed views of the Pacific. Roof decks with protective coverings are utilized for am-



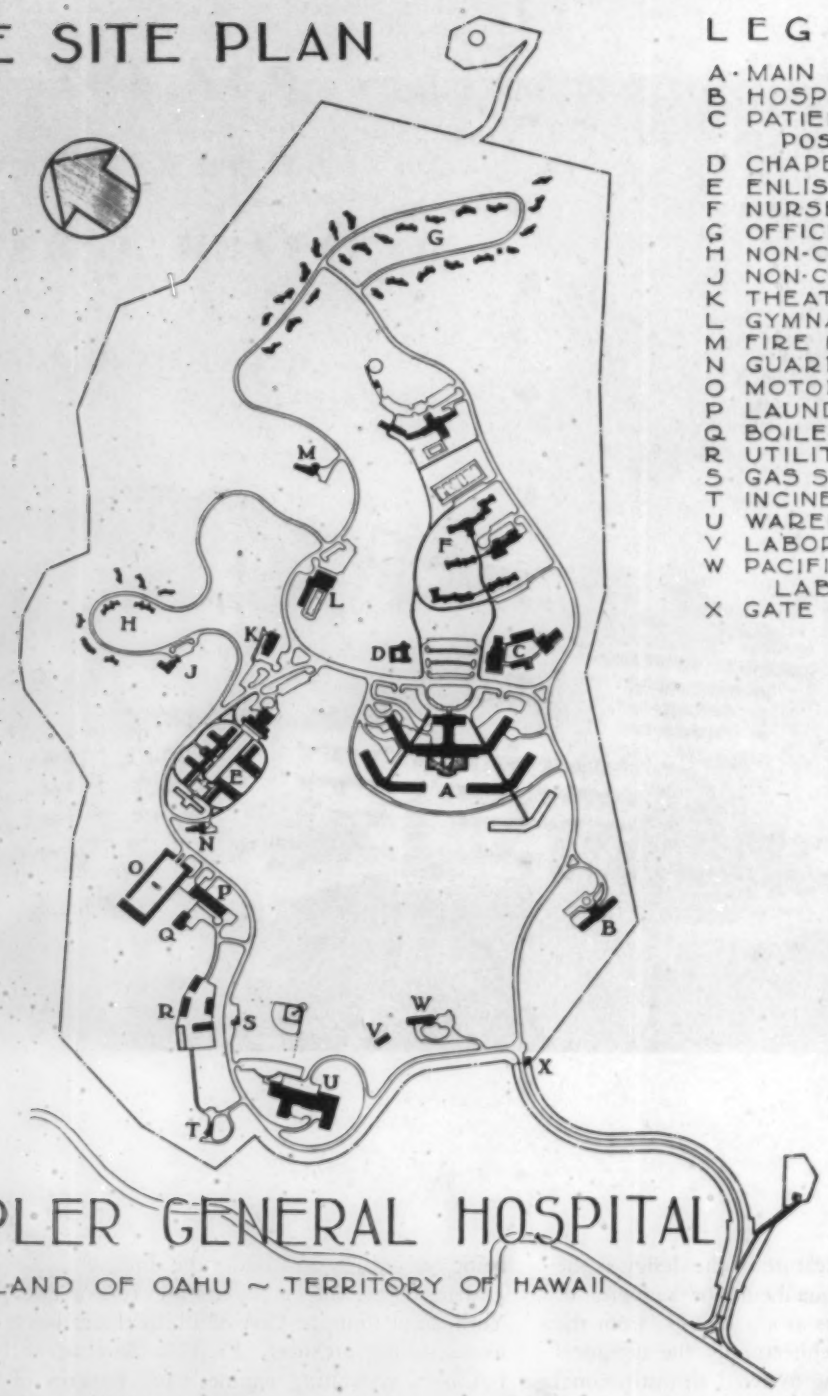
bulatory patients. A distinctive feature of the design is the use of horizontal projecting aqua-media or canopies of reinforced concrete over windows as a protection from the sun's glare and from rain. Architecturally the designers strove for simplicity, and, desiring to avoid an institutional appearance, created a harmonious group with the character of a residential community.

The buildings, generally of reinforced concrete rigid-frame construction, with stuccoed concrete-block walls and partitions, are designed to be earthquake resistant by certain innovations in design and construction, including tied foundations and the division of the buildings into structurally isolated units.

The Office of the Chief of Engineers is in charge of its design and construction. Supervision of construction is being carried forward under the direction of the Honolulu District Office. The architects are York & Sawyer of New York, Paul Philippe Cret of Philadelphia being associated as consulting architect. Fred N. Severud of New York has been consulting engineer for features of the work dealing particularly with earthquake resistance. Meyer, Strong & Jones of New York have been the consulting electrical engineers, and Fred L. Moesel of New York the consulting engineer for ventilating, air conditioning and steam supply systems.

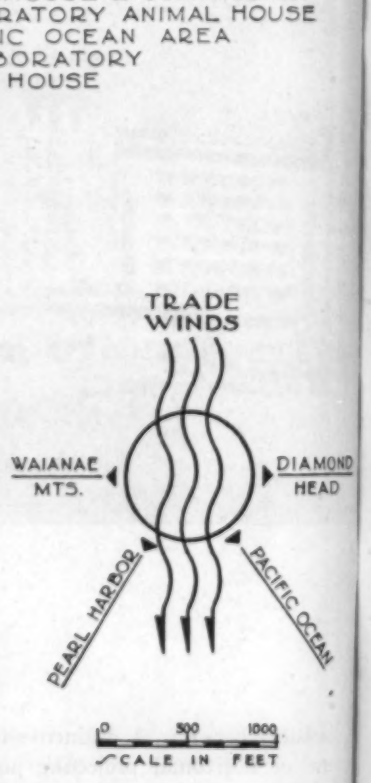
The work has been planned in close cooperation with the Office of the Surgeon General of the U. S. Army Medical Corps. Many special design features have been incorporated in the project in keeping with the latest developments in hospital treatment of Army personnel.

THE SITE PLAN



LEGEND

A · MAIN HOSPITAL
B HOSPITAL UNIT "G"
C PATIENTS' RECREATION & POST EXCHANGE
D CHAPEL
E ENLISTED MENS' BARRACKS
F NURSES' QUARTERS
G OFFICERS' QUARTERS
H NON-COM OFFICERS' QUARTERS
J NON-COM OFFICERS' CLUB
K THEATRE
L GYMNASIUM
M FIRE HOUSE
N GUARD HOUSE
O MOTOR POOL
P LAUNDRY
Q BOILER HOUSE
R UTILITY SHOPS
S GAS STATION
T INCINERATOR
U WAREHOUSE & COMMISSARY
V LABORATORY ANIMAL HOUSE
W PACIFIC OCEAN AREA LABORATORY
X GATE HOUSE

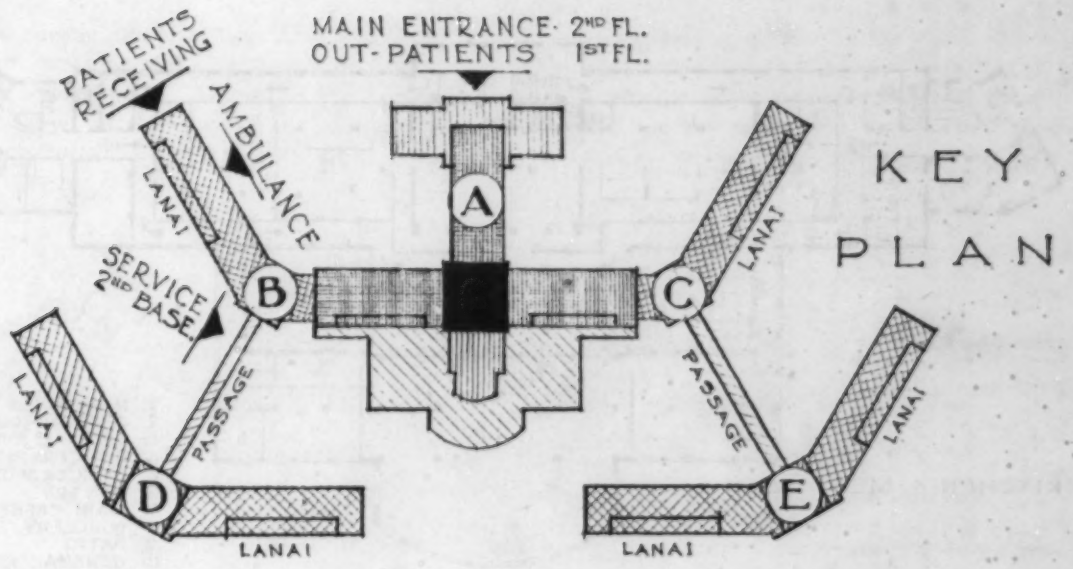


TRIPLER GENERAL HOSPITAL

ISLAND OF OAHU ~ TERRITORY OF HAWAII

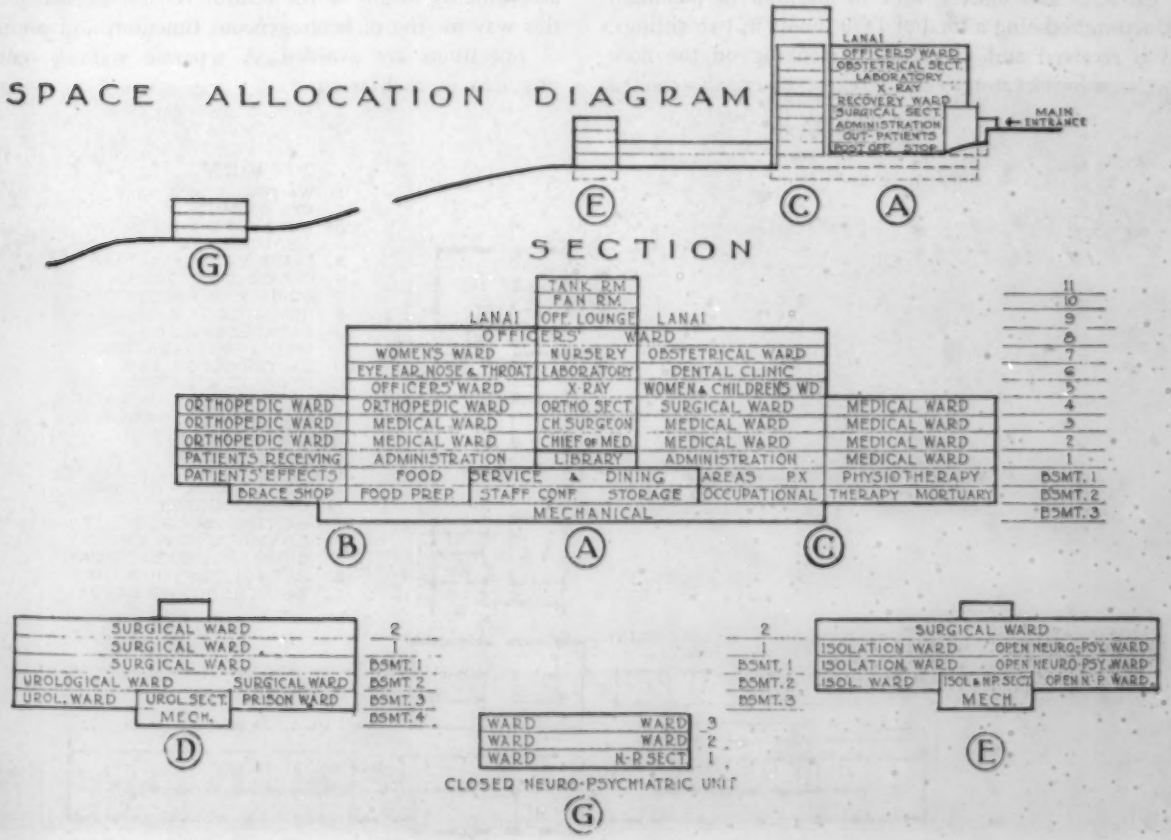
The Tripler General Hospital is located on rugged terrain on the lower slopes of the Koolau Mountain Range, a site having magnificent, unbroken views of the Pacific Ocean in a 180° arc. Located on a ridge flanked by steep ravines, the irregular 360-acre site presents planning difficulties due to a rise of 600 feet in 1¼ miles. The largest level area is occupied by the main hospital building, with the various quarter groups ranged conveniently about it on the slope. The Patients' Recreation and Post Exchange group and the Chapel are placed close to the hospital, for the convenience of ambulatory patients. Officers' houses are grouped informally at the top of the site, while the utility and service buildings are partially hidden from view off to one side of the lower slope.

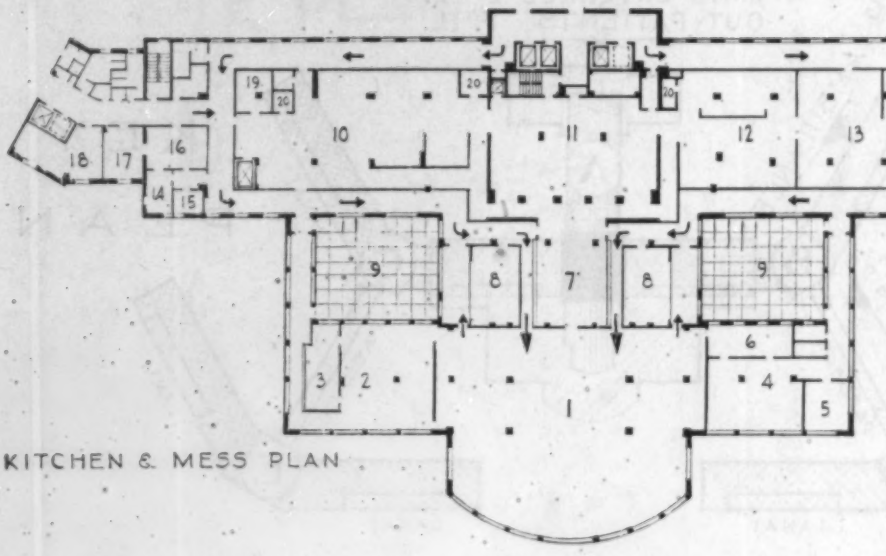
Access to the hospital is from the main highway from Honolulu, which borders the lower end of the site, by a winding road, branching on the right to the main hospital and the quarters and recreation buildings, and on the left to the service area. The naturalistic road pattern as well as the building layouts are largely controlled by existing natural contours of the terrain, advantage being taken of the topography wherever possible.



Above is a diagrammatic plan of the Main Hospital Building showing the central nine-story administrative Unit "A" flanked by extended four-story medical ward wings "B" and "C," and Units "D" and "E," housing "recuperative wards," separated from the central mass, but joined to it by connecting corridors. This planning makes optimum use of view, of sunlight; and its openness invites prevailing winds to the wards. The differences in grade have been utilized to provide separate entrances at grade on different levels, the main entrance being on the second floor, the out-patients on the first floor of Unit "A," the patients receiving entrance on the first floor of Unit "B."

Below is a space allocation diagram for the hospital with areas labeled according to their respective functions. It will be noted that the "disturbed" mental patients have been isolated in a self-contained Unit "G" removed from the main hospital. Certain other specialized functions have been isolated in dead-ended wings in Unit "A," as, for example, the operating suite and recovery ward, with private elevator and complete air conditioning.





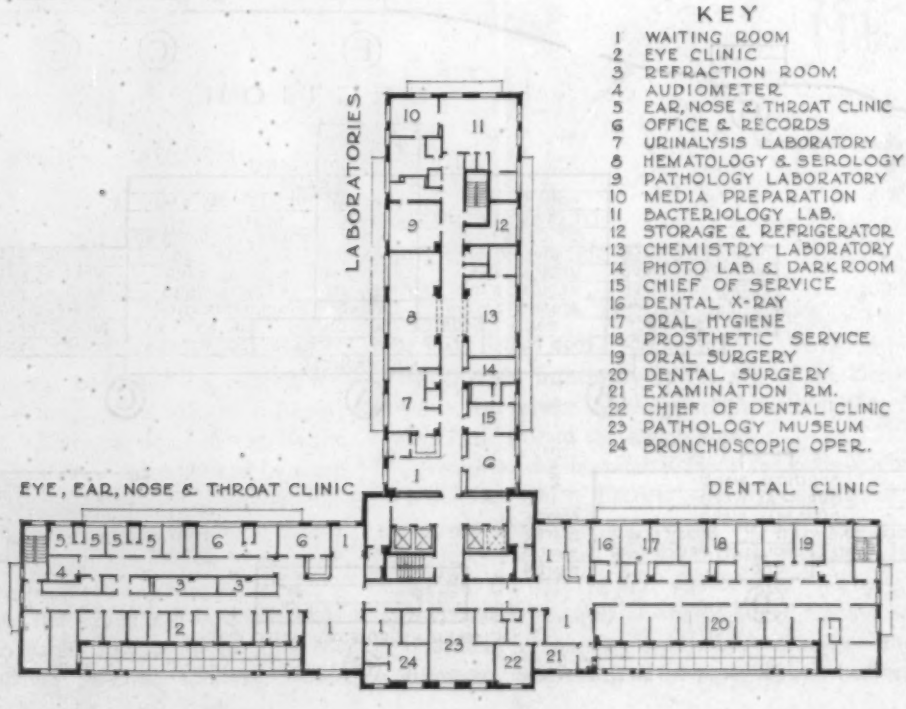
KITCHEN & MESS PLAN

KEY

1 MAIN MESS
2 SPECIAL DIET MESS
3 SPECIAL DIET CAFETERIA
4 OFFICER PATIENTS' DINING RM.
5 OFFICERS' DINING ROOM
6 PANTRY
7 MAIN CAFETERIA
8 SCULLERY
9 PATIO
10 GENERAL KITCHEN AREA
11 RANGE & OVEN AREA
12 PASTRY & COLD FOODS
13 FOOD TRUCK STORAGE & WASHING
14 CHIEF DIETITIAN
15 CLERK'S OFFICE
16 ASSISTANTS.
17 OFFICER IN CHARGE
18 MESS SERGEANT
19 COOK'S STORES
20 REFRIGERATOR

Above—Plan of the Central Mess facilities in Unit "A" illustrating the use of an inside "island kitchen" surrounded by aisles of circulation, with the division of the feeding process into two "chow lines" passing the cafeteria simultaneously. There is a special diet section with its own cafeteria and officers' area in addition to the main mess, accommodating a total of 1550 diners in two sittings. Food is received and prepared for cooking on the floor below, sent by elevator to the kitchen, where the cooked food is either loaded onto food carts for distribution to the hospital, or served in the cafeteria.

Below—Diagram of a typical clinical floor, where the Eye, Ear, Nose and Throat, and Dental Clinics, and the hospital Laboratory are isolated in "dead ended" wings, accessible by means of the central vertical circulation. In this way mixing of heterogeneous functions and confusion of operations are avoided. A separate waiting room is provided in each wing.

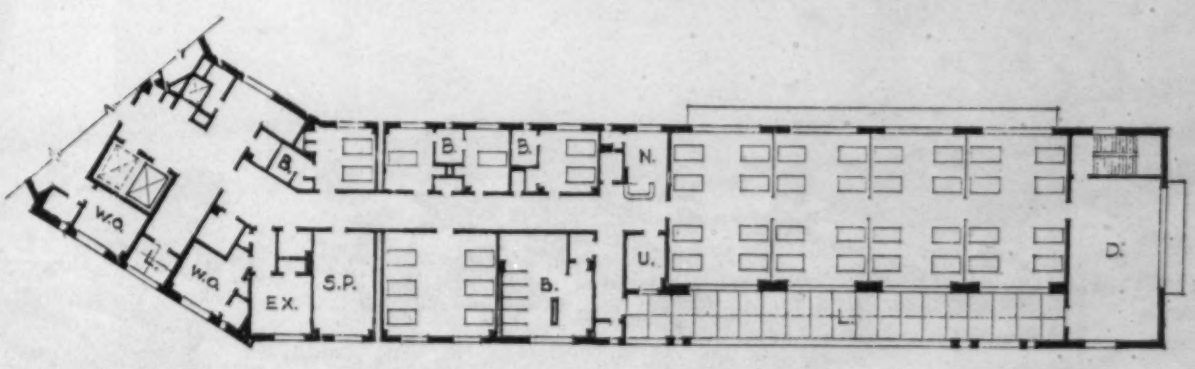


KEY

1 WAITING ROOM
2 EYE CLINIC
3 REFRACTION ROOM
4 AUDIOMETER
5 EAR, NOSE & THROAT CLINIC
6 OFFICE & RECORDS
7 URINALYSIS LABORATORY
8 HEMATOLOGY & SEROLOGY
9 PATHOLOGY LABORATORY
10 MEDIA PREPARATION
11 BACTERIOLOGY LAB.
12 STORAGE & REFRIGERATOR
13 CHEMISTRY LABORATORY
14 PHOTO LAB & DARKROOM
15 CHIEF OF SERVICE
16 DENTAL X-RAY
17 ORAL HYGIENE
18 PROSTHETIC SERVICE
19 ORAL SURGERY
20 DENTAL SURGERY
21 EXAMINATION RM.
22 CHIEF OF DENTAL CLINIC
23 PATHOLOGY MUSEUM
24 BRONCHOSCOPIC OPER.

A TYPICAL NURSING UNIT

Below—A typical nursing unit of 44 beds, 32 of which are in the main ward, consisting of 4 Copenhagen bays, with the remainder in smaller units. All patients have access to the spacious lanai on the sheltered side of the building, which has an unobstructed view of the Pacific Ocean, and to a large day room at the end of the ward. The plan provides cross ventilation, while an aqua-media on the windward side acts as an awning, protecting the wards from tropical sun and rain. Eighty-seven per cent of all nursing units are in "dead-end" locations.

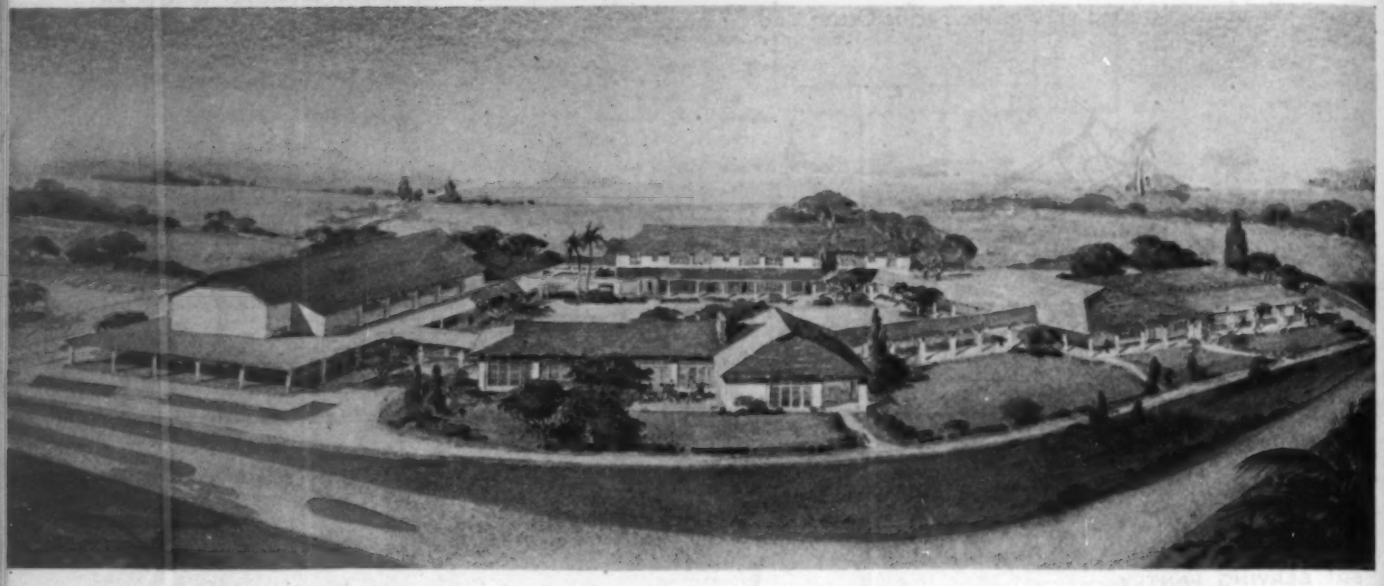


KEY

B	BATH & TOILET
D	DAY ROOM
EX	EXAMINATION RM.
L	LANAI
N	NURSE'S STATION
S.P.	SERVING PANTRY
U	UTILITY RM.
W.O.	WARD OFFICE

Below—A view of the Closed Neuro-Psychiatric Building, designed as a self-contained unit entirely separate from the main hospital to house "disturbed" mental patients. A hydro-therapy room, exercise rooms, day rooms and a large occupational therapy area are provided for treatment of patients.

PATIENTS' RECREATION AND POST EXCHANGE

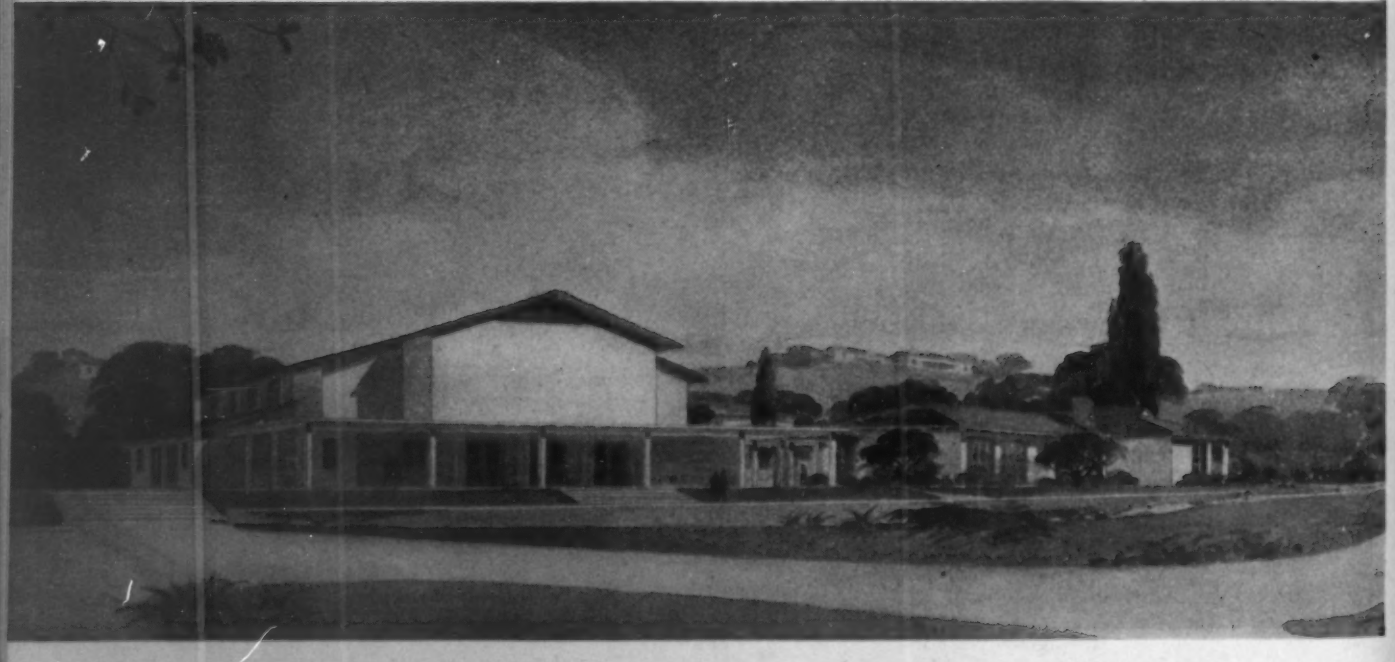


General view of the group which is close to the main hospital

The primary thought of the architects in considering the secondary buildings of the project was to design for pleasant living in the delightful climate and setting of Hawaii. Open, irregular planning was used, conforming to the nature of the terrain, and a sincere effort was made to bring the outdoors into the buildings.

The Patients' Recreation and Post Exchange group, illustrated on this page, is designed for the convenience of ambulatory patients, where circulation is facilitated by level covered walks encircling a pleasant central patio. A large modern auditorium is provided along with a lounge, reading room, several shops, a bank, and quarters for civilian guests, as well as an ample post exchange sales room, and a lunch bar.

Closer view of the large auditorium with its wide arcades



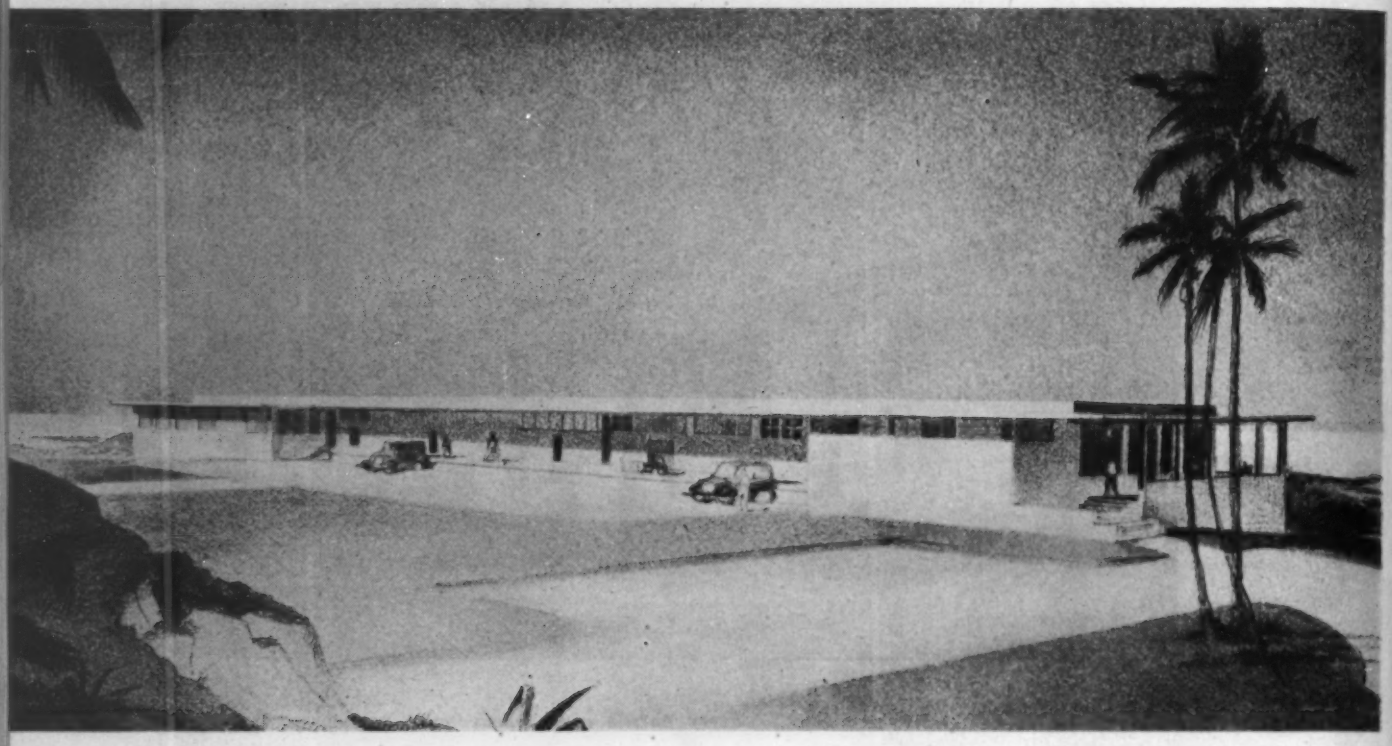
Every nurse's room opens on a spacious and shaded lanai

The Nurses' Quarters Group is an example of one of the residential groups, well integrated and harmonious in design. It is composed of two-story, 16-nurse, basic units linked together in a variety of interesting ways. Every nurse's bedroom has direct access to a pleasant shaded lanai or covered porch.

The buildings are residential in character, with the feeling of native Hawaiian architecture in their long, low roof lines, overhanging eaves, louvered roof ventilators, and precast concrete or hardwood grilles to screen lanais and stair halls. The several buildings of the group are joined by covered walks. An administrative unit houses the lounge, game room, dining room, kitchen and the chief nurse's suite.

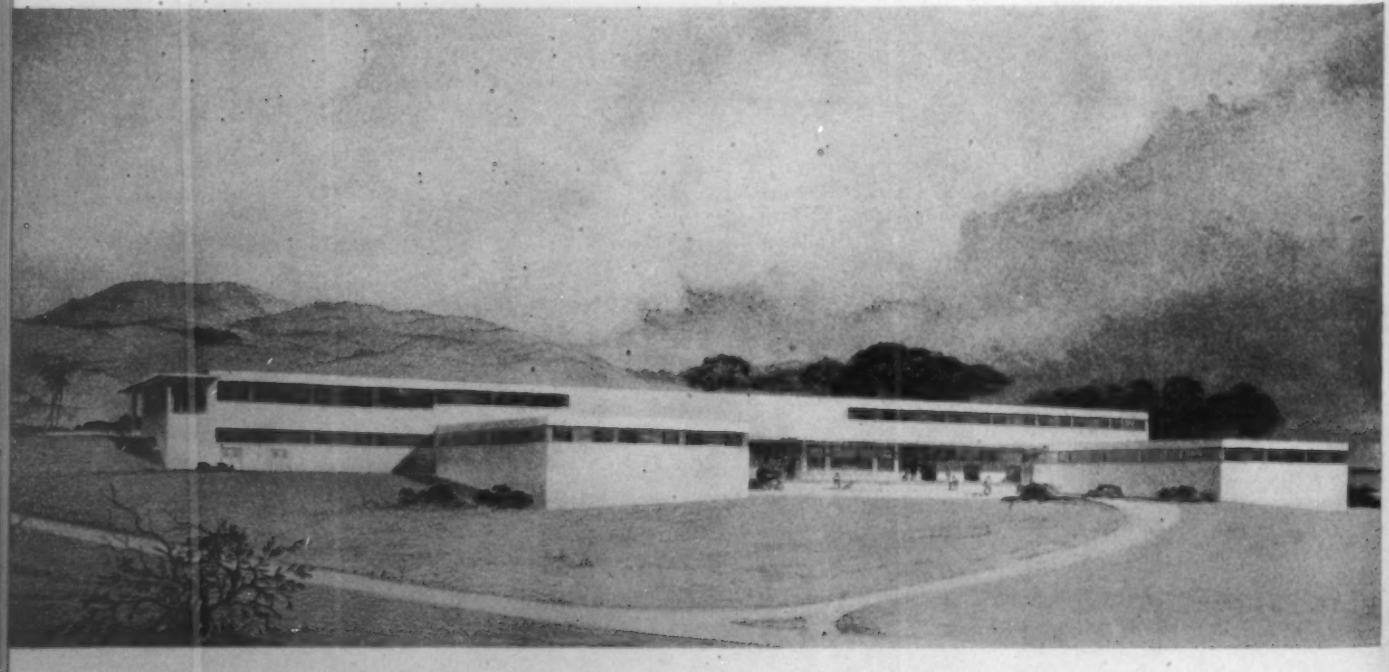
The residential character of the design is maintained throughout

THE SECONDARY BUILDINGS



Outstanding among the secondary buildings designed to take the fullest advantage of the sloping site is the Warehouse and Commissary building, whose two principal functions are separated on two floors, each with its own offices and loading platforms at grade. The Commissary and Quartermaster Supply Storage facilities are located on the upper floor, while the Medical Supply Warehouse occupies the lower floor. Ventilation and light are obtained by the use of louver panels alternating with glass block panels in long horizontal bands. These secondary buildings are on the so-called service road and have been designed for economy in a more severe, simple utilitarian character, of reinforced concrete and masonry.

Another example in which the sloping site is used to

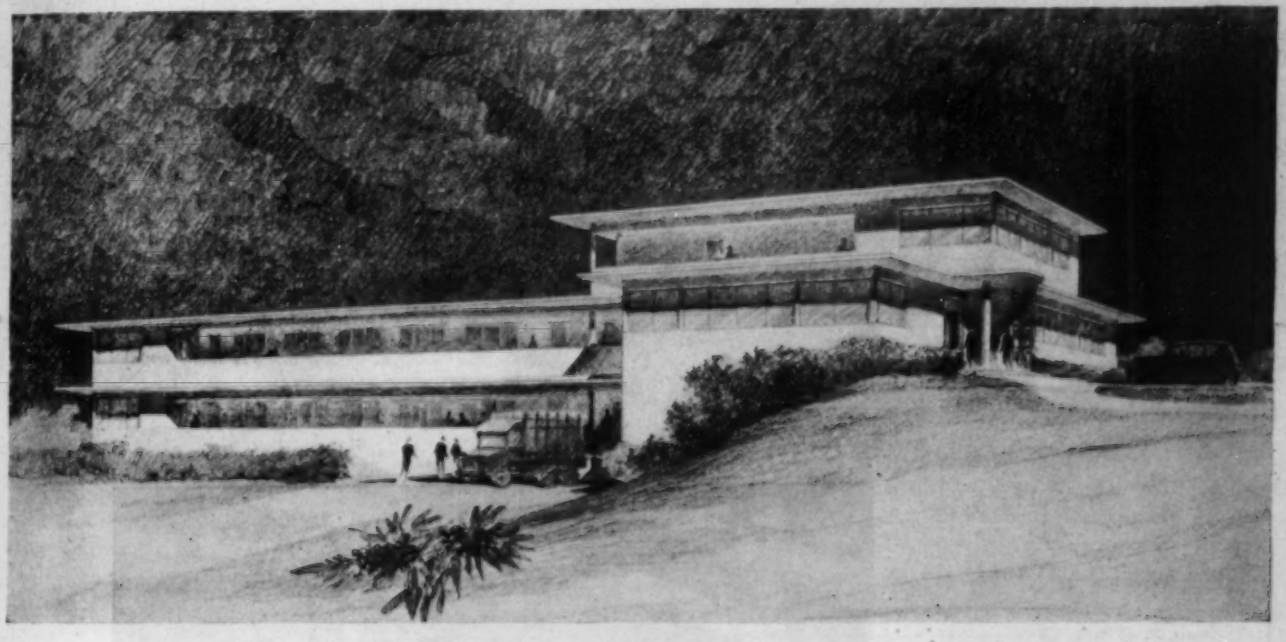


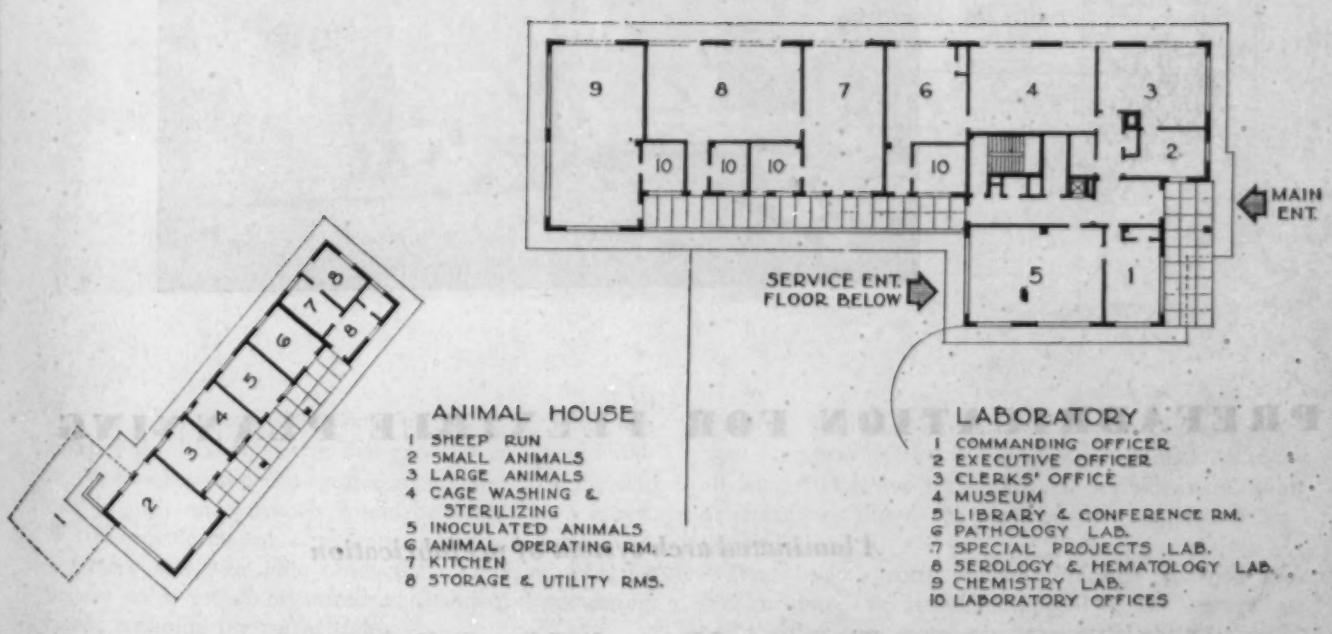
PACIFIC OCEAN AREA LABORATORY

The Pacific Ocean Area Laboratory pictured below is entirely separate from the Tripler General Hospital though located on the hospital site. It will function as a medical research laboratory specializing in the study of tropical diseases found in the Pacific Ocean theater of operations.

The three-story building follows the natural grade, having a service entrance on the first floor and the main entrance on the floor above. A feature of the building is its outside circulation by means of sheltered lanais connecting the various laboratories. Exterior walls are of poured concrete, eliminating column projections which would interfere with an orderly piping layout.

As animals are needed for experiments with disease, a small animal house is located near the laboratory with provisions for large and small animals, and including a small outdoor sheep-run.



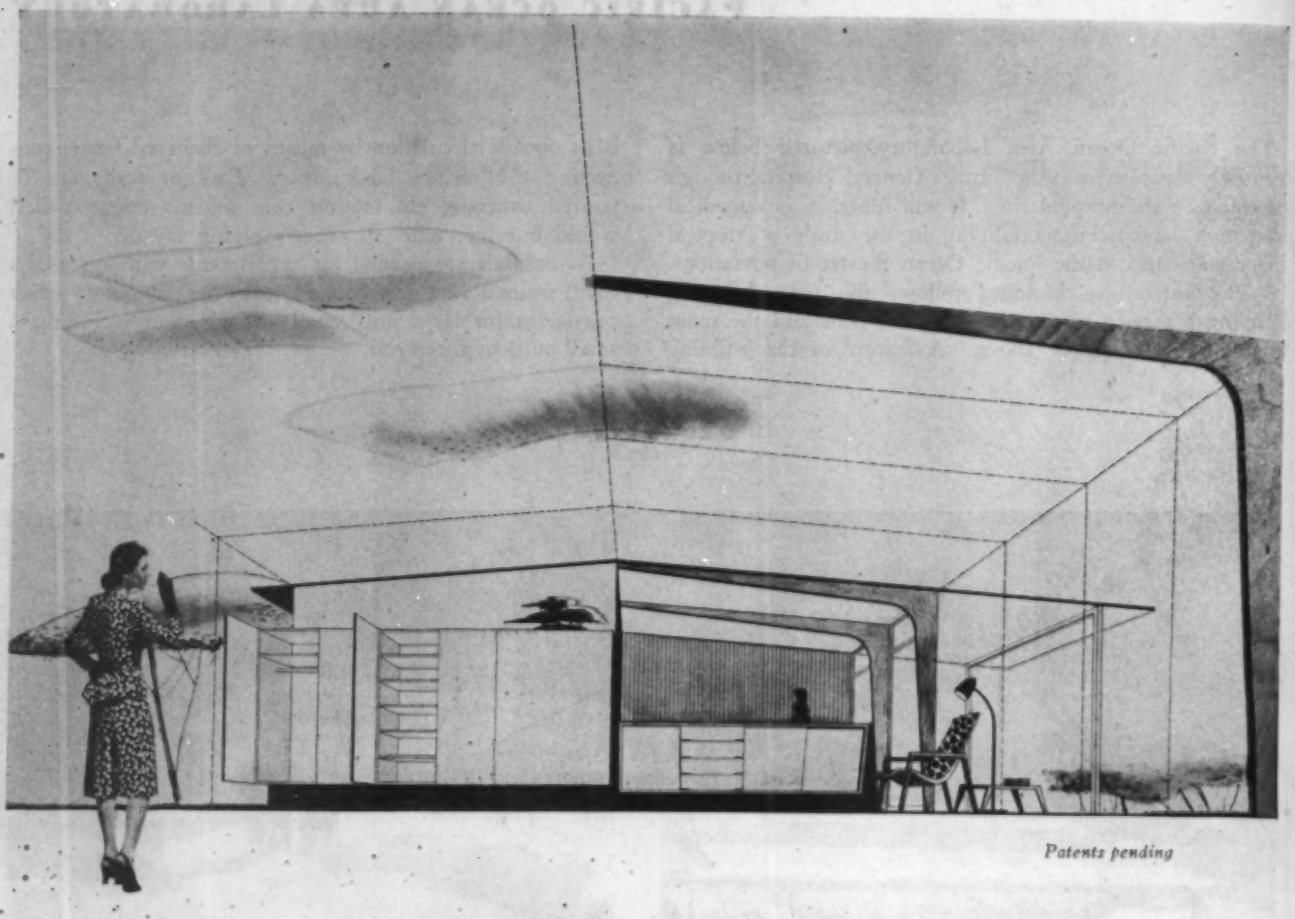


ANIMAL HOUSE

1 SHEEP RUN
2 SMALL ANIMALS
3 LARGE ANIMALS
4 CAGE WASHING & STERILIZING
5 INOCULATED ANIMALS
6 ANIMAL OPERATING RM.
7 KITCHEN
8 STORAGE & UTILITY RMS.

LABORATORY

1 COMMANDING OFFICER
2 EXECUTIVE OFFICER
3 CLERKS' OFFICE
4 MUSEUM
5 LIBRARY & CONFERENCE RM.
6 PATHOLOGY LAB.
7 SPECIAL PROJECTS LAB.
8 SEROLOGY & HEMATOLOGY LAB.
9 CHEMISTRY LAB.
10 LABORATORY OFFICES

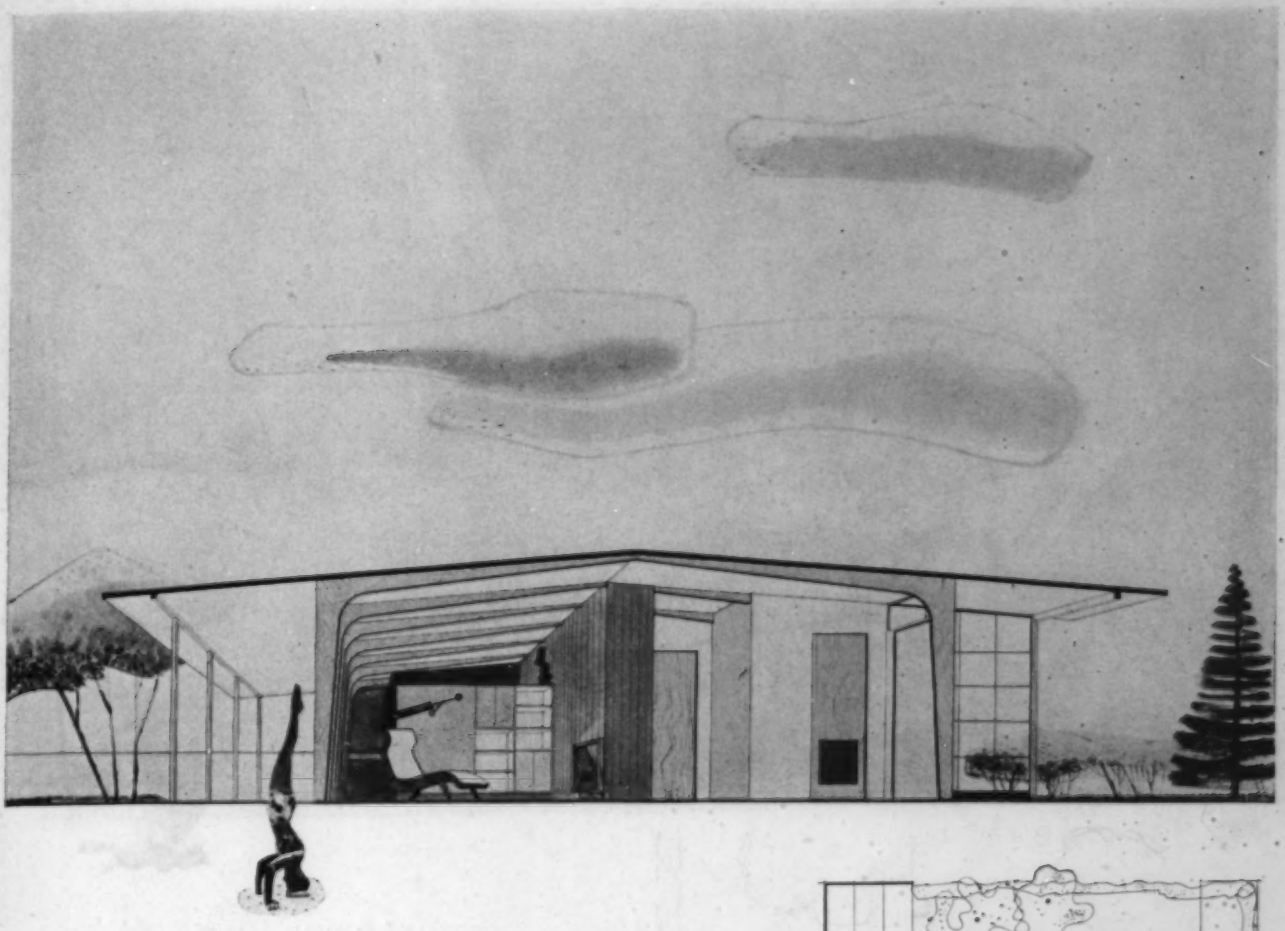


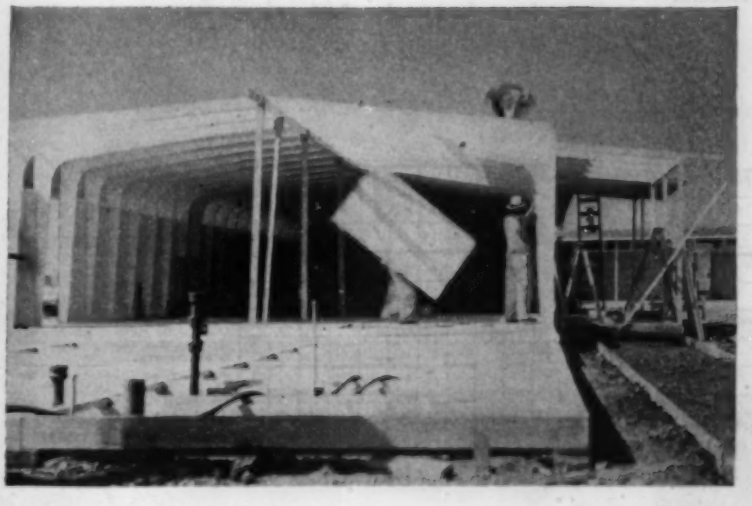
Patents pending

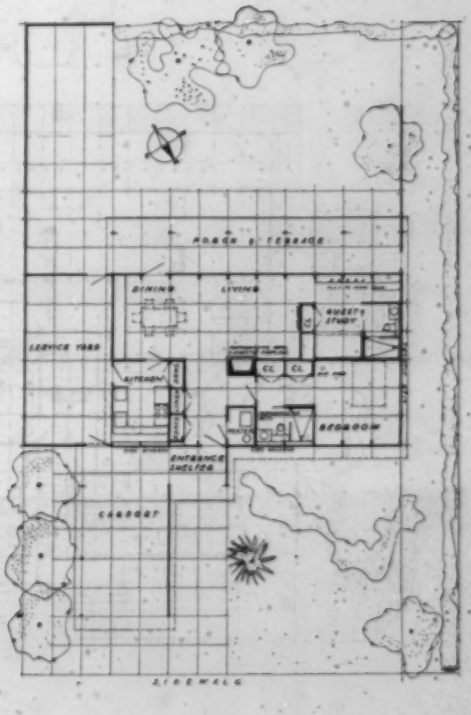
PREFABRICATION FOR FLEXIBLE PLANNING

A laminated arch system of prefabrication

Wurster and Bernardi, Ernest J. Kump, Architects Associated



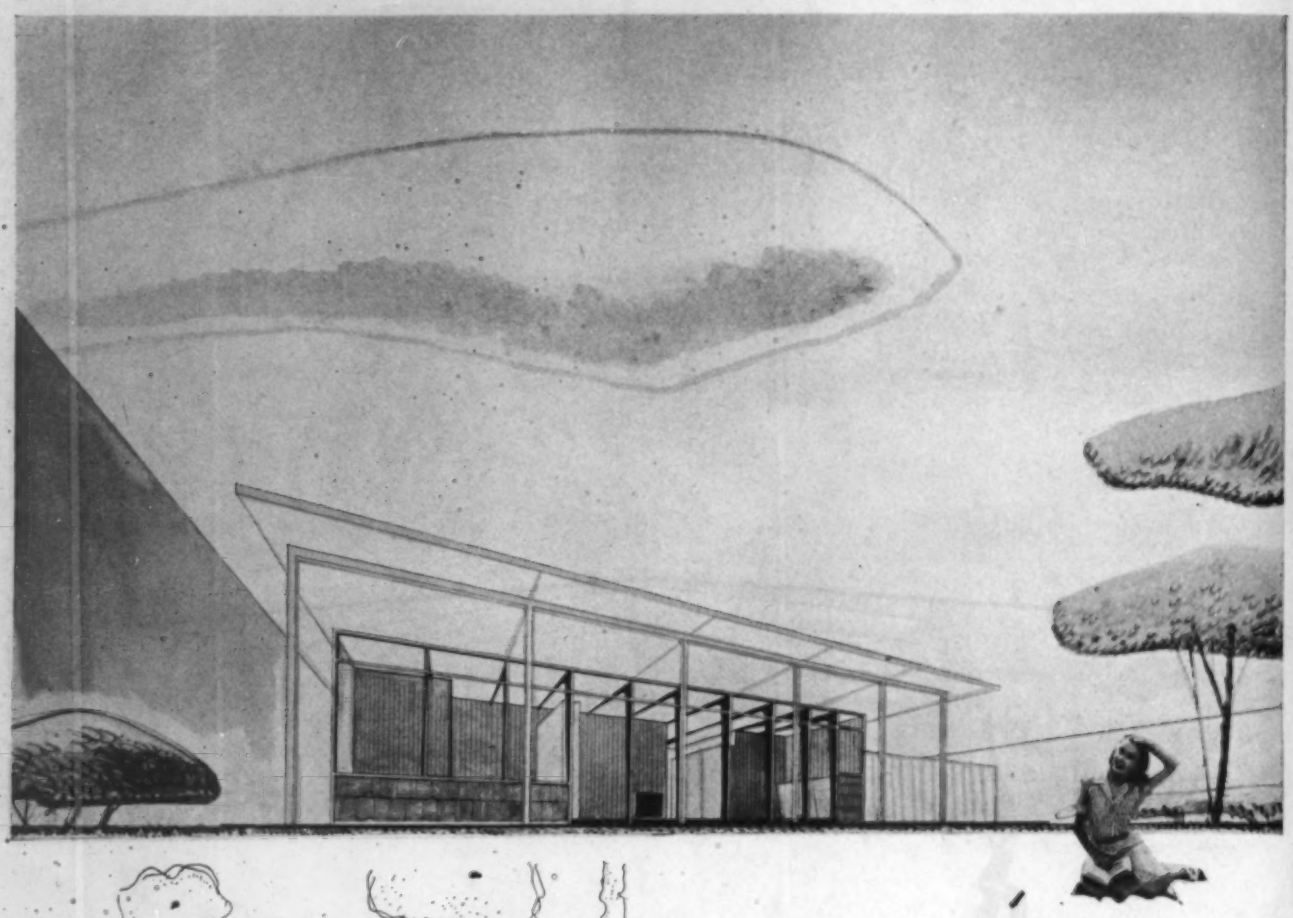


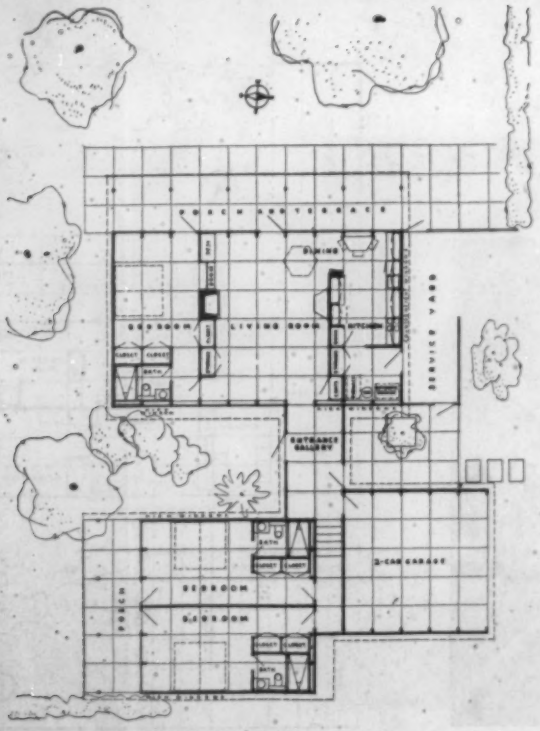


As the small photographs above might suggest, here is a house prefabrication system that grew out of school building techniques. When it became apparent early in the war that a great many schools would be needed in a hurry, Mr. Kump developed a prefabricated system, established a factory and went into production. He later sold the factory to a group organized as Standard Engineering Corp., retaining the patent rights.

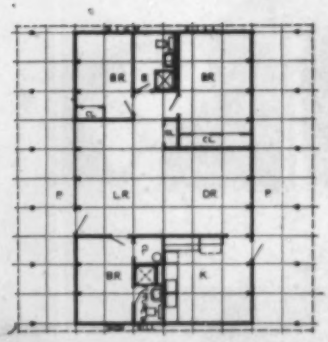
Recognizing the merits of the system for residential building, William Wurster and Theodore Bernardi joined with Kump to develop the obvious possibilities. A major advantage for houses is the complete flexibility of planning or replanning, due to the freedom from any interior bearing walls.

The system centers around laminated plywood arch construction. The arches are spaced at 4-ft. centers, are tied together with continuous members at the floor, eaves, and ridge. Hollow frame wall and roof panels, with any





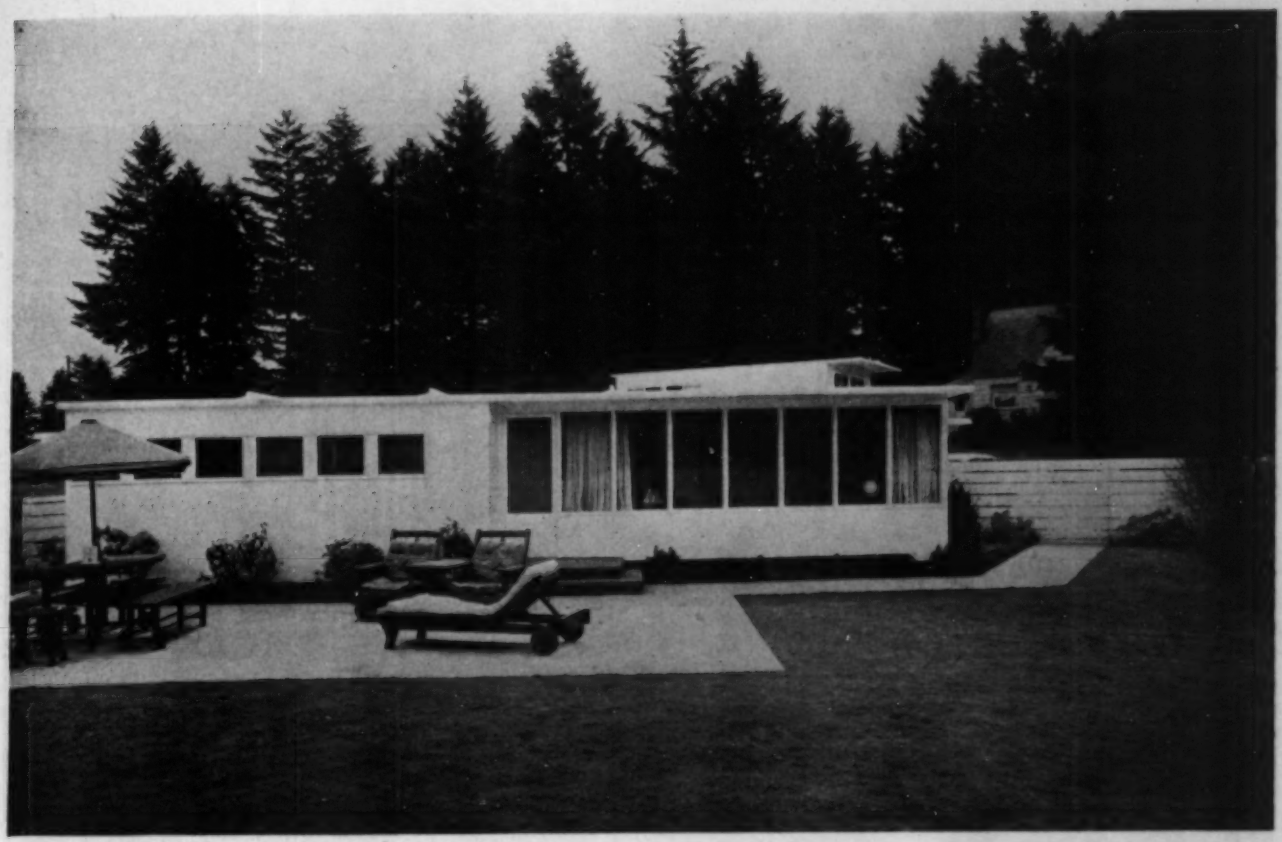
These two floor plans were selected from a number of different schemes, to show the possibilities of the arch system of prefabrication for both small and large houses, for both compact and open planning



desired surfacing, are applied between and attached to the arches. Windows and doors are attached in the same manner. Where wooden floors are desired, floor beams can be prefabricated and floor panels dropped between them. In general, however, it is contemplated to use concrete or tile floors on the ground, with some floor system of radiant heating.

Bernardi mentions two factors that had particular appeal: (1) the possibility for handsome houses without any self-conscious "streamlined" effects; (2) "the erection process is childishly simple." Once the foundations are in place, no rulers or saws are required on the job, just a hammer and screw-driver. There are dados, shoulders or notches wherever one member fits onto another; all holes are drilled at the factory.

Equally applicable to large or small houses, to open or compact planning, the system is considered to have development possibilities in several different directions. A house built for a client and photographed by Roger Sturtevant will be shown in a forthcoming issue.



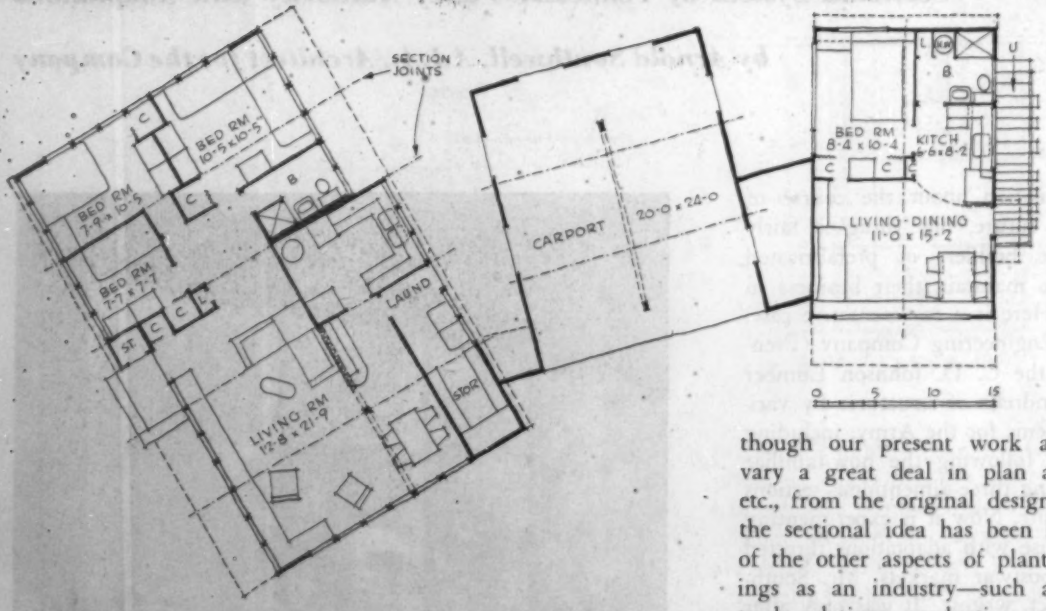
PREFAB POINTED TOWARD POSTWAR SALES

Experimental Houses by Prefabricated Engineering Company Follow Sectional System of Tennessee Valley Authority with Adaptations

by Arnold Southwell, A.I.A., Architect for the Company

IN ALL of the speculation about the course of prefabrication in the future, one thing is fairly certain: that wartime builders of prefabricated structures will seek to maintain their business in the civilian markets. Here is a representative case.

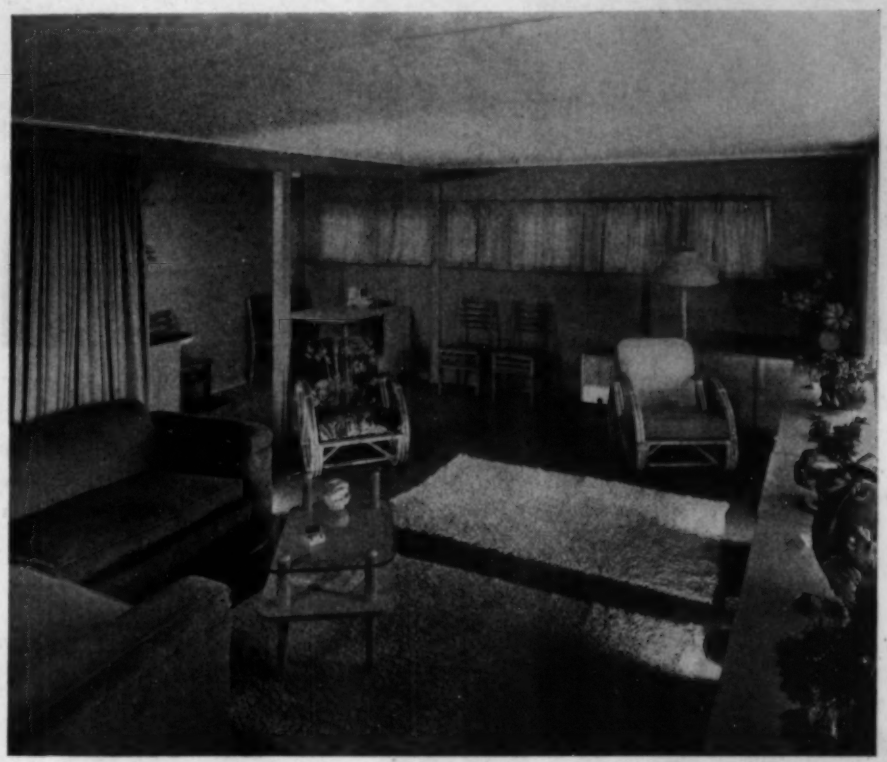
The Prefabricated Engineering Company (Prenco), a subsidiary of the C. D. Johnson Lumber Corporation, built hundreds of structures by various prefabrication systems for the Army, including 1800 sectional houses following the now-familiar TVA system of building three-dimentional sections to be trucked to the site. Now it is experimenting with the sectional house with adaptations directed toward sales in the postwar markets. Mr. Southwell, company architect, writes: "It was only after producing sectional homes and after much study of all the problems involved that this company decided that the sectional method was the best to concentrate upon and to develop further. Even



though our present work and future intentions vary a great deal in plan arrangements, details, etc., from the original designs prepared by TVA, the sectional idea has been maintained. . . . All of the other aspects of plant-manufactured buildings as an industry—such as sales, distribution, trade relations, production methods, material uses, equipment, postwar conveniences, etc., are being simultaneously studied."

Obviously the company is not falling into the better-mousetrap error. While the technical ex-

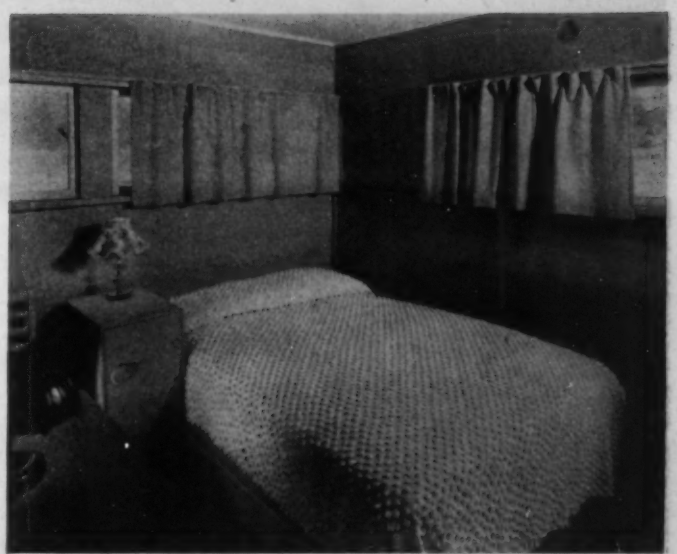
This experimental house tests livability of two sectional models. Main house is a standard TVA Type C-1 unit with one additional 8-ft. section added to living areas. The other one, a standard TVA Type A-6, one-bedroom, two-section unit, was set up on a 7-ft. foundation, providing additional storage space and playroom (photo next page)

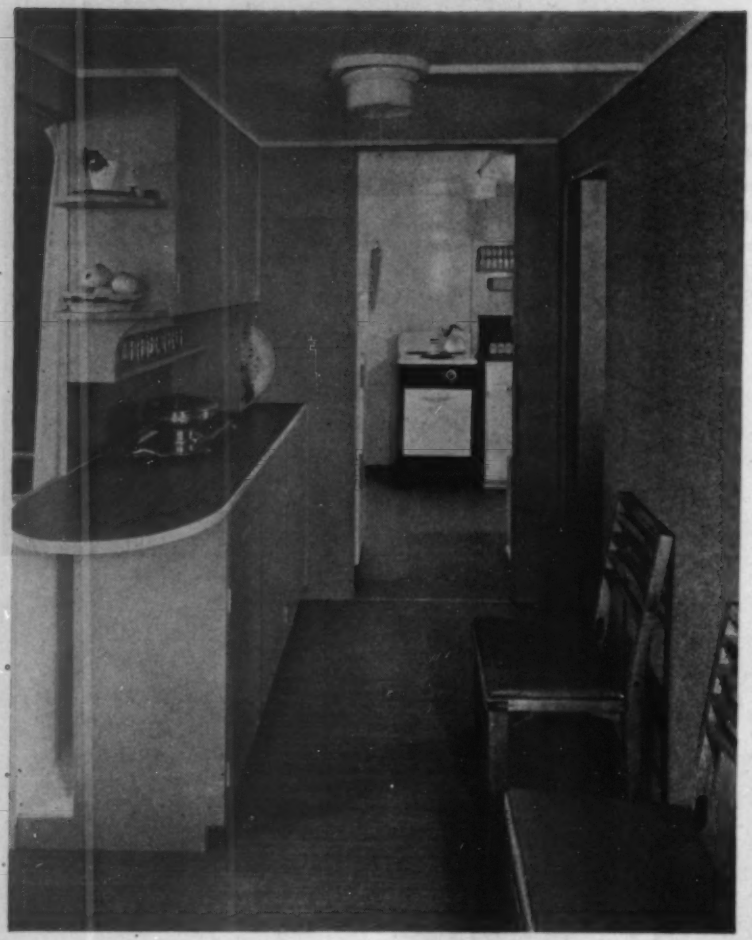


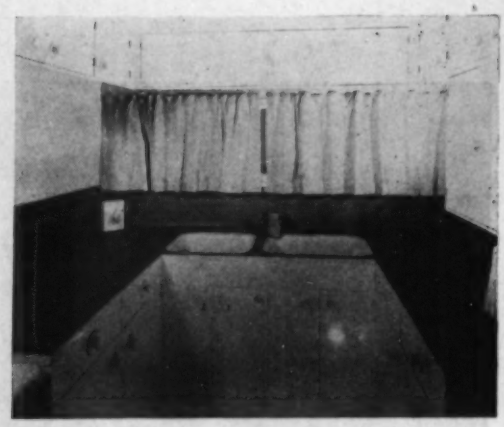
perimentation continues, the current list of items under study carries more than a suggestion of sales consciousness:

1. Interchangeability of entire sections in the two- and three-bedroom units.
2. The mechanical equipment all in one of the sections.
3. Fixed light windows with ventilating door becoming a louver when open.
4. Sliding windows, flush inside and out, which form a part of the structure.
5. Louvred overhangs to provide solar heat control.

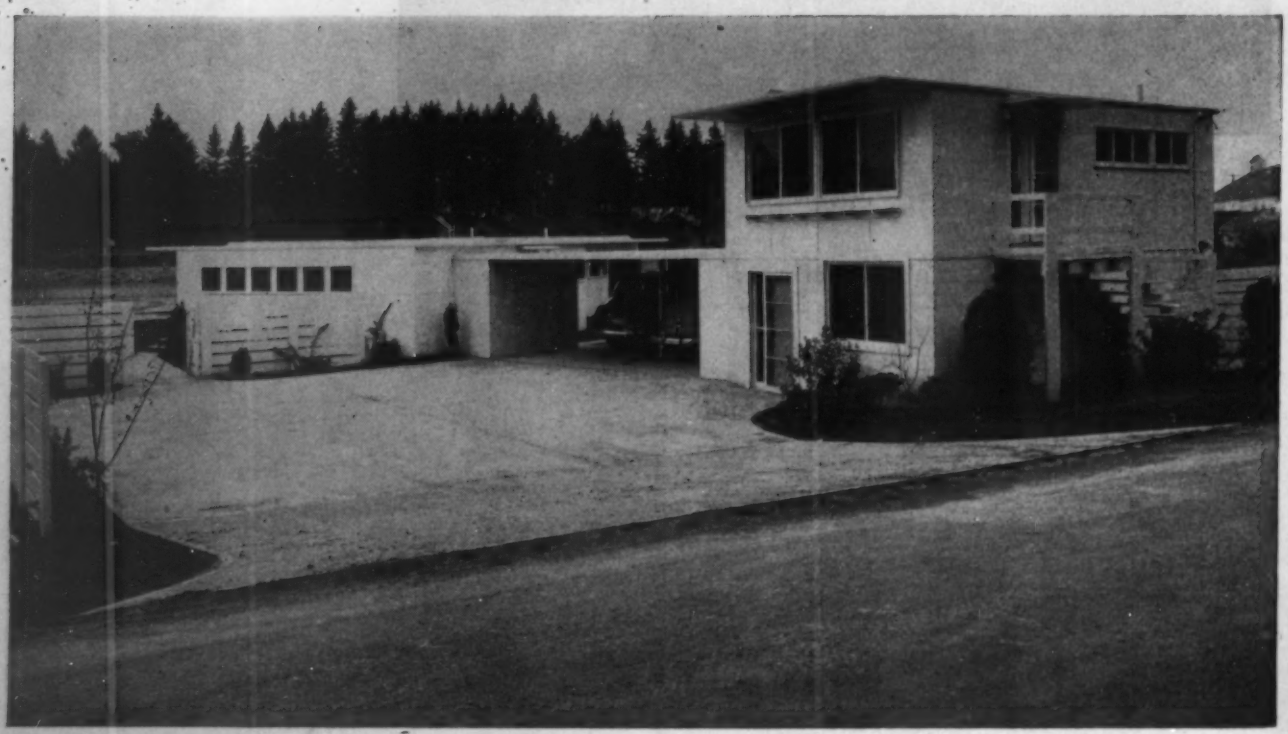
The house illustrated is at Lake Oswego, Ore., and is occupied by Robert F. Johnson, company head.

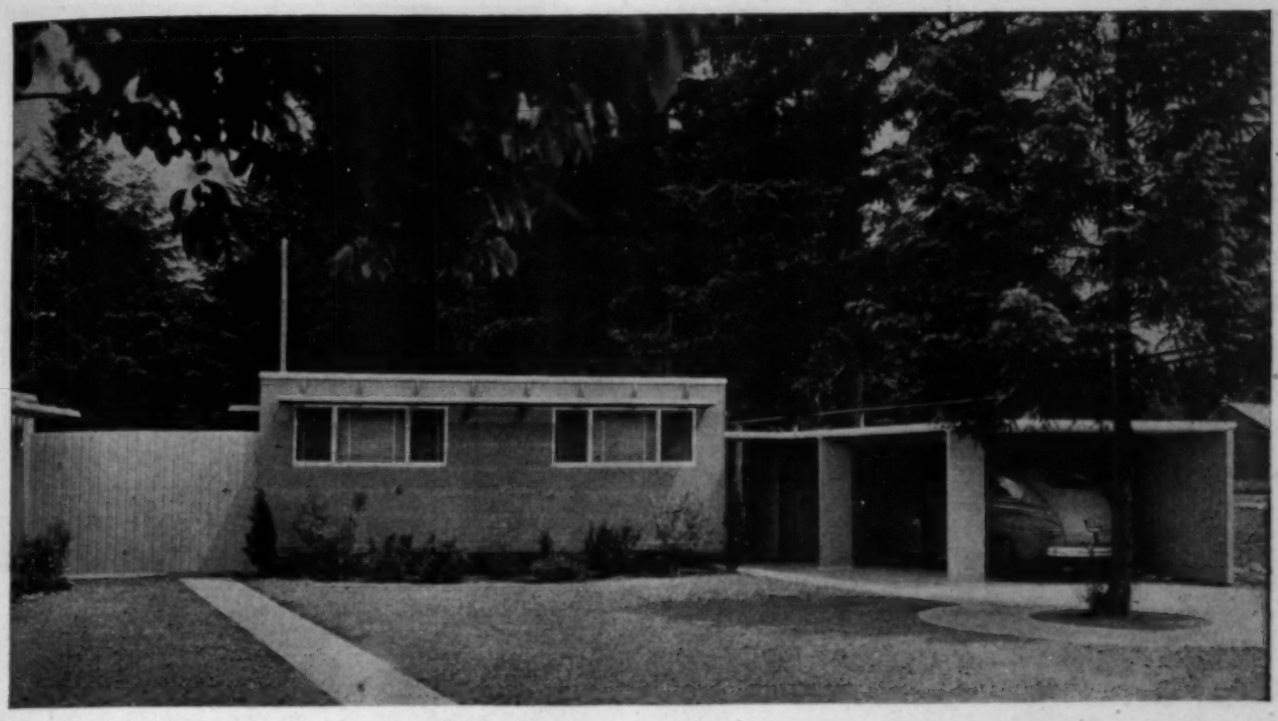


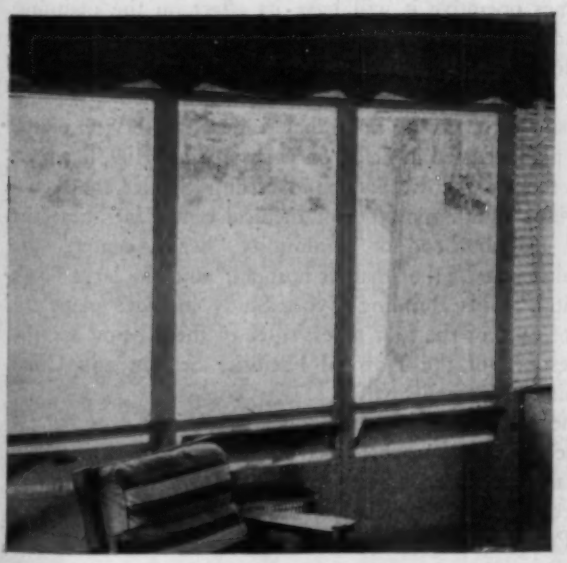




A U-plan kitchen in one 8-ft. section makes an efficient and workable unit; serving buffet in the adjoining section adds shelf and dish storage space convenient to the dining area, also to the service door





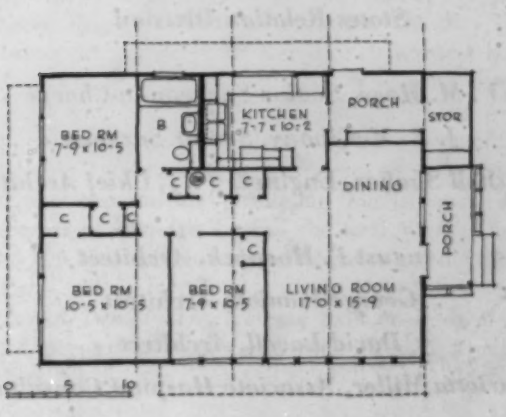


3–Bedroom, 4–Section Model

THIS is a Prenco revision of the TVA-designed C-1 unit. With four 8-ft. sections, it makes a house 24 by 32 ft. Larger windows of the fixed-light type have top and bottom ventilating louvers. Solar heat is controlled with outside sunshades.

Floor, wall, partition and roof panels forming the section shell are plywood-surfaced, stressed-skin design. Exterior panels are insulated with a 2-in. blanket. Roof finish is canvas, bedded and spray painted. All plumbing piping and fixtures are installed complete, ready for field connections.

Built-ins are featured, including: storage cabinets, beds, dressing tables, chests, dining table and chairs, sofa bed, clothes closets with fittings, curtain traverses and tapes, even a flower box.



HOSPITALS

Architectural Record's Building Types Study Number 104

U. S. Public Health Service

Hospital Facilities Section
States Relation Division

V. M. Hoge, Senior Surgeon-in-Charge
J. R. McGibony, Senior Surgeon
Marshall Shaffer, Engineer (R), Chief Architect

August F. Hoenack, Architect
George Ivanick, Architect
David Lovell, Architect
Henrietta Miller, Associate Hospital Consultant

WHILE construction of hospitals may certainly be expected to reach record proportions after the war, there will be significant breaks with tradition. In the words of a famous comedian, "the program's going to be different."

What is new is that this time there *is* a program. In the past hospitals have been built where voluntary money was available. Whole sections of America, particularly rural America, were left without hospitals. And, of recent years, without doctors. Also there was virtually no co-ordination of anything — hospitals were naturally competitive, rather than supplementary. Now, with a widespread appreciation of the need for more and better health facilities, an appreciation heightened by the war, there is general acceptance of the idea that some serious planning is in order.

The needs for hospital facilities of various types will be accurately established—for individual localities as well as for the country; the program will be better coordinated with the needs; and the buildings will be better planned for their specific purposes. And it appears also that the money will be available.

Architects will appreciate that as such over-all planning becomes operative it will have its effect on the planning of individual hospitals. First, there will be new types of buildings, especially in rural areas. Moreover, these and other hospitals will be designed and equipped according to their niche in a "coordinated hospital service plan." This plan, charted in detail on pages 108 and 109, has been proposed by the U. S. Public Health Service, and contemplates four basic types of medical center facilities: the small neighborhood or community "health center," the "rural hospital," the "district hospital," and the large "base hospital." This Building Types Study includes plans for one of each of the four types, three of them being specific suggestions of the Hospital Facilities Section and Chief Architect Marshall Shaffer.

The plan is much more than an academic proposal. It is the basis for proposed federal aid, which shows considerable promise of being forthcoming. The plan is embodied in S. 191, now before the Senate, "a bill to amend the Public Health Service Act to authorize grants to the

Roy Perry, for U.S.P.H.S.

states for surveying their hospitals and public health centers and for planning construction of additional facilities, and to authorize grants to assist in such construction." The bill has had universal support from organizations in the medical and hospital fields and from virtually all other groups in any way interested, including labor and farm organizations.

Public Health officials emphasize, however, that whether or not Congressional action implements the hospital plan with federal funds, the proposal will go forward in one way or another. It is not just a hospital construction program, but a broad new method of providing hospital and health care, much of which could be carried forward no matter who provided the new facilities.

Since the bill provides for federal grants to states, not to individual hospital projects, the program calls for action on several fronts:

1. It involves the formation of state commissions to receive funds and carry out provisions of the act. Already these commissions are being organized; many are already at work with preliminary studies of the need.

2. To see that architects are represented on state commissions is an active project of the American Institute of Architects. Through its Committee on Hospitalization and Public Health, chairmanned by Carl A. Erikson of Chicago, it is establishing necessary contacts in state government circles to the end that the planning profession will have an opportunity to make its own contribution to original surveys and to later planning procedures. Since the whole program is based on organization of health facilities by states, it is important that the beginning state commissions be properly set up for effective work. Henry Saylor, speaking for A.I.A. President James R. Edmunds, emphasizes the architect's obligations, on page 106.

3. A basic requirement is detailed study of the need for hospital facilities. No tabulation of statistics will show it properly unless it is worked out region by region, community by community, for the greatest immediate need is in small, isolated areas not now served by public health clinics or hospitals.

Already two academic studies have been prepared, one by the U. S. Public Health Service, one by the Farm Security Administration. Both highlight the rural need, while adding up a tremendous building program for the country at large. A major study of a grass-roots nature is being undertaken with private funds, by the Commission on Hospital Care, sponsored by the American Hospital Association (see Dr. Bachmeyer's article, page 107).

Since S. 191 would provide funds for state surveys, presumably there is little reason to doubt that hospital construction in the years ahead will be well directed toward the people who have the greatest need.

4. Further steps on the agenda involve an operational coordination of hospital facilities as diagrammed on page 108. New buildings to benefit from federal grants would be worked into such a plan, and designed for it. But many, if not most, of the larger hospitals in the scheme are existing ones. Many existing smaller ones could be integrated into the plan, though many of these would require additions, alterations and new equipment.

5. While the whole hospital service plan at present includes only general hospital facilities, it is recognized that in special types of hospitals—mental and nervous institutions, tuberculosis, chronic diseases — America's plant is far from adequate. Right now the program merely mentions this as a future front for attack. There is no trouble about finding an ambitious building program in the present plans.

The Surgeon General made an early estimate of need for general hospital beds totaling around 231,000. Testifying before Senator Pepper's committee on wartime health and education, he called for 165,000 new general hospital beds, and pointed out that 66,000 additional beds would be required to replace those in now obsolete hospitals. He said also that 2,400 modern structures are needed to house local health departments. Including mental and tuberculosis types of hospitals he ran the total need to more than 400,000 beds, without any reference to chronic disease hospitals.

Editors of *The Modern Hospital* have made their own survey of needed hospital construction, adding it up to $3,000,000,000.

THE PRESENT OPPORTUNITY

By Thomas Parran, Surgeon General, U. S. Public Health Service

U. S. P. H. S.

TODAY public health stands on the threshold of its greatest opportunity. Never before has the public been so well informed in health matters and so vocal in its demand for better health care.

We are living in an age of science and technology. Organized for war, the United States has become the strongest military power on earth. Our achievements in the science of medicine are no less remarkable than those in the science of war. Only a small part of this genius, if organized in the pursuit of better health, would make us also the healthiest nation on earth.

Only a relatively few years ago doctors labored under the handicap of limited knowledge as to the cause of many diseases; today we know the cause, cure and means of prevention of all but a few. The organization and machinery for the application of this knowledge, however, has not kept pace with the science of medicine. In fact, in many places physical facilities for hospital and public health care have progressed but little since the days of the horse and buggy doctor. Although time is rapidly removing the old-fashioned doctor from the rural scene, he is not being replaced by a modern counterpart. As a result, a great many communities are finding it increasingly difficult to obtain medical care.

Although the war accelerated the departure of physicians from rural areas, the trend was well established before the war began. It is futile, therefore, to expect the end of the war to bring much increase in the supply of rural physicians. The present-day doctor is trained to work with modern tools—hospitals, clinics, and diagnostic aids. Unless hospitals and public health services organize to bring these advantages to rural areas, good health care for all is an unattainable goal.

A Coordinated Hospital-Public Health Plan has been suggested as a mechanism for equalizing the quality of hospital and medical care between urban and rural areas and for making this care more readily available. The plan as outlined and illustrated herein, perhaps visualizes a greater degree of service integration than is to be found in any one plan in operation today. On the other hand, most of the principles implied have been instituted in many places.

It is to be hoped, therefore, that state planning commissions, in drawing up their long-range health and hospital programs, will keep in mind the advantages of a coordinated program; that well-established hospitals will grasp the opportunity to broaden their field of service through assistance to smaller institutions; and that small hospitals to be built will safeguard their standards by seeking association with larger institutions.

A CHALLENGE TO HOSPITAL ARCHITECTS

By Henry Saylor, for A.I.A. President James R. Edmunds, Jr.

NEITHER those who administer our country's hospitals, nor the architects who designed them, are satisfied with the results; if contentment should prevail it would signify the end of the progress.

Undoubtedly, one major cause of the architect's periodic remorse is the lack of continuous collaboration with those who run his hospitals after they are built. In between hospital jobs, too much unobserved water has run over the dam. Excepting during the short period when design and administration are in a huddle over a new job, these two elements have been passing each other by on the opposite sides of the street.

A far closer and continuing relationship is promised for the future. The architects, through an Institute Committee on Hospitalization and Public Health, will work more closely with the American Hospital Association

in seeking broad objectives of public health. With the A.H.A. representing the voluntary hospitals of the land and The Institute Committee representing the architectural profession, a closer and continuing collaboration is assured. The product should be better hospitals.

Parallel with this collaborative relationship is another of great importance. The United States Public Health Service, through its State Relations Division, maintains a Hospital Facilities Section. Its personnel includes specialists in medicine, hospital administration, nursing, and in hospital design and equipment. Here is a national clearing house for the technology of hospital and health center design. It does not design hospitals; it does give the architect, upon his request, the fruits of the latest thinking in unit design, mechanical equipment and the scores of details of which a set of working drawings is the correlated expression. Any architect, with a hospital to design, who fails to avail himself of this up-to-the-minute technical aid is not only missing a bet, he is missing the boat.

This country is on the very threshold of a belated but powerful movement that will make a really adequate survey of its public health facilities—*what* they now are and *how distributed*. We seem to be nearing the end of an era in which hospitals, excepting those built by governmental authorities, sprouted only where nature happened to plant a philanthropist with a yen for public health. That was inevitable in our pioneer years, but it isn't good enough today. Whether the Senate Bill 191 makes its presently unhampered way through to enactment, or not, this country is eventually bound to cast a critical eye over its present facilities and set about the big job of making them both adequate and properly spaced. That job is not one that the architects can blithely turn over to George to do. If we shirk our obvious responsibility, we shall do so to our peril and to our shame.

The direct paths to this national objective are open and in plain view. We should participate, individually and vigorously, in activating and directing, with the medical, hospital administrative, nursing and public health authorities, the necessary state-wide surveys of health and hospital facilities. We should reinforce the A.H.A. recommendation that an architect be appointed on the survey commission in every state. The architect's training in the analysis and appraisal of the present physical plant is undeniably needed here, but it will not be utilized if he crawls up some shady bank and imitates a violet.

An adequate and properly distributed system of hospitals and public health centers for this country of ours will not be achieved if we do not make a start.

We have a challenge calling for the best that is in us.

AMERICA'S FIRST HOSPITAL INVENTORY

By A. C. Bachmeyer, M.D.

Director of Study, Commission on Hospital Care

THE spotty distribution of America's hospitals means that many rural Americans must go without medical or hospital care. Every day thousands of sick and injured people are forced to travel many miles away from their homes for hospitalization—or just to see a doctor. We know that these conditions exist, but we do not know their degree. We do not know exactly *where* they exist, because there is no complete record of our hospitals.

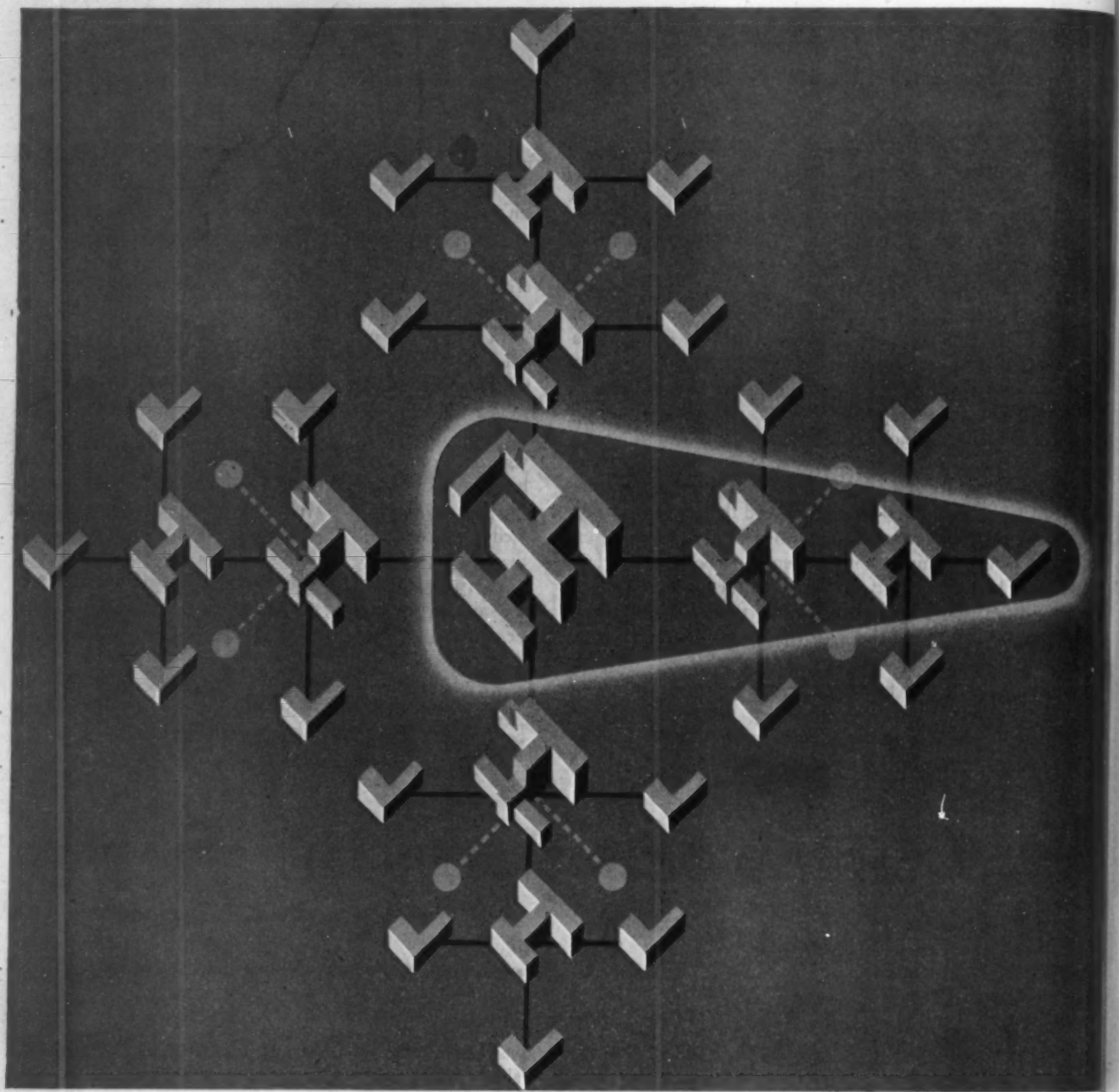
It is necessary to know these things if the millions of dollars in private and public funds for postwar hospital construction are to be spent wisely.

In order that such a record might be established, the Commission on Hospital Care is directing a complete inventory of the nation's hospitals. This first hospital inventory in American history is part of a broad hospital study which will include data covering the historical development of the American hospital and an analysis of economic, population and geographic factors—all of which have a direct bearing on postwar hospital construction and the future quality of hospital service.

The Commission on Hospital Care was inaugurated by the American Hospital Association, and is sponsored by state and regional hospital organizations. It is assisted in its work by the United States Public Health Service, which has made technical personnel and physical facilities available to the staff. Also, state health departments have offered assistance and in some instances are actually conducting the studies. The study is financed by the W. K. Kellogg Foundation, the Commonwealth Fund and the National Foundation for Infantile Paralysis. They are united by a sincere interest in finding the facts.

The technical staff of the Commission acts as a central agency for the stimulation and coordination of state studies. Besides urging the states to organize, finance and conduct their own studies, the Commission provides uniform work materials, furnishes technical assistance and tabulates all of the information for the state surveys. Each state will collect its own information, study its own problems, and make its own plans.

Forty states are now in one stage or another of their surveys. Actual field work among the hospitals is underway or about to start in Iowa, Massachusetts, Michigan, Missouri, Montana, New Hampshire, North Dakota, Wisconsin and Wyoming. State legislation authorizing hospital studies has been enacted, although the surveys have not yet been inaugurated in Delaware, Indiana, Maine, New Mexico, North Carolina, Oklahoma, Oregon, Rhode Island, Vermont, Virginia and Washington.



Small circles represent chronic disease hospitals, for later consideration

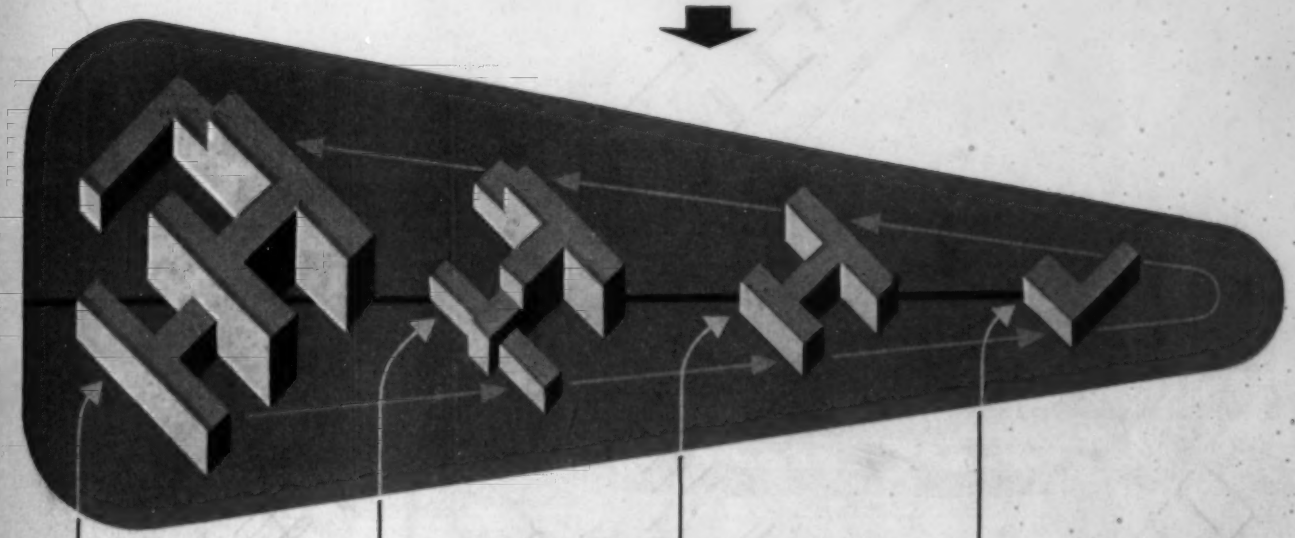
HOSPITALS were formerly considered only as places in which to care for the seriously ill. Modern programs of hospital construction and operation have as their aim a more inclusive type of hospital service. Something more on the order of the medical center, which combines and coordinates the three major aspects of medical care—preventive, diagnostic, and therapeutic.

On this principle the Surgeon General of the U. S. Public Health Service has suggested the coordinated hospital service plan, charted above, to provide the three types of care throughout the country through a network of hospitals and health centers. With the large "base" or "teaching" hospital as the center, there would be radiating lines of communication, or "hospital service areas." Next in the line would be a large general hospital in an urban area, called here the "district" hospital. Then a smaller one, the "rural hospital," which would be of minimum size for efficient and satisfactory operation. For the isolated communities too small for even a minimum hospital there would be a sort of outpost clinic or diagnostic clinic, a rural health center with small nursing unit.

At the end of the line the only nursing service given would be for obstetrical or emergency cases; principal activities would be preventive and diagnostic. Other patients would be referred up the line, as warranted. There would also be constant interchange between hospitals of information, training, and consultation. And separate buildings would be designed and equipped according to their place in the system. Thus a great area, presumably a state, might be tied together by a network of facilities.

COORDINATED HOSPITAL SERVICE PLAN

Plan provides for constant exchange between hospitals of information, training, and consultation service, and personnel, and for referral of patients when indicated



BASE HOSPITAL

Teaching Research Consultation

- CANCER CLINIC
- PSYCHIATRIC SERVICE
- HEART CLINIC
- MAJOR SURGERY
- INTERNAL MEDICINE
- OBSTETRICS
- PEDIATRICS
- ORTHOPEDIC SURGERY
- COMMUNICABLE DISEASES
  - Tuberculosis
  - Venereal Disease
  - Other
- TEACHING
  - Nurses
  - Interns
  - Residents
  - Post Graduates
- LABORATORY
  - X-Ray
  - Pathology
  - Bacteriology
  - Chemical
- PHYSIOTHERAPY
- DENTISTRY
- EYE, EAR, NOSE, THROAT
- DIETETICS

DISTRICT HOSPITAL

- MAJOR SURGERY
- OBSTETRICS
- INTERNAL MEDICINE
- COMMUNICABLE DISEASES
  - Tuberculosis
  - Venereal Disease
  - Other
- PEDIATRICS
- EYE, EAR, NOSE, THROAT
- DENTISTRY
- PHYSIOTHERAPY
- LABORATORY
  - X-Ray
  - Pathology
  - Bacteriology
  - Chemical
- TEACHING
  - Nurses
  - Interns
  - Dietetics

RURAL HOSPITAL and Health Center

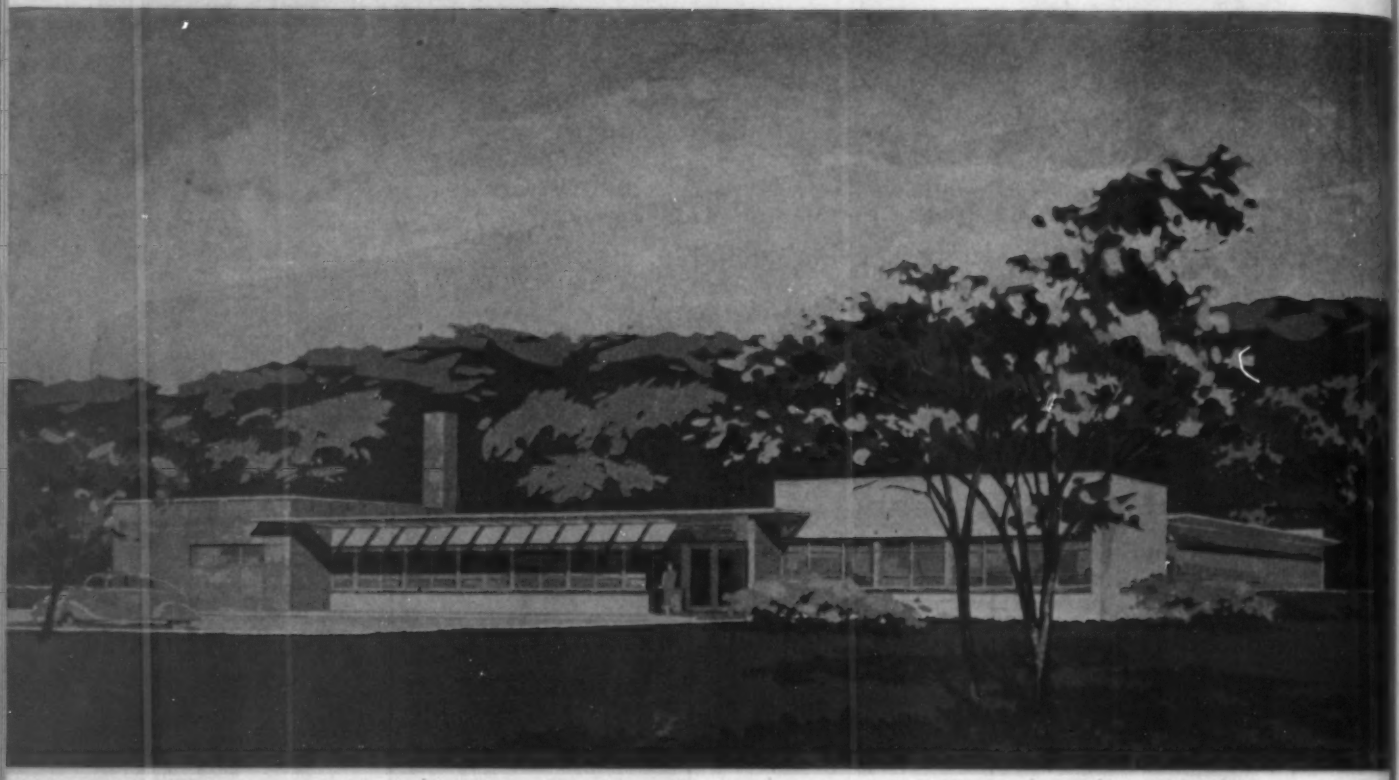
- INTERNAL MEDICINE
- OBSTETRICS
- EYE, EAR, NOSE, THROAT
- DENTISTRY
- MINOR AND UNCOMPLICATED SURGERY
- LABORATORY
  - X-Ray
  - Bacteriology
- ADMINISTRATIVE PUBLIC HEALTH OFFICES
  - Health Officer
  - Sanitarian
  - Public Health Nurses
  - Public Health Clinics
  - Maternal and Child Health
  - Tuberculosis
  - Venereal Disease
  - Public Health Education

RURAL HEALTH CENTER

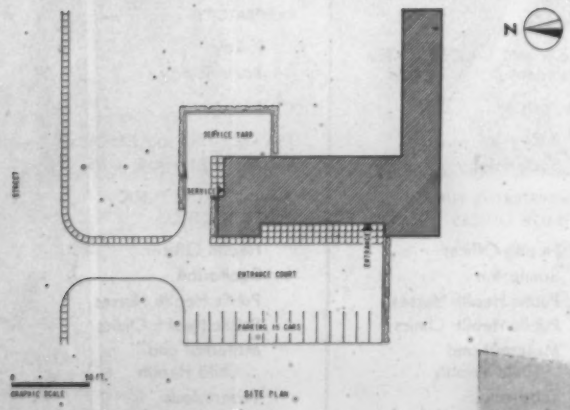
- OBSTETRICS
- EMERGENCY MEDICAL AND SURGERY
- LABORATORY
  - X-Ray
  - Bacteriology
- DENTISTRY
- PRIVATE OFFICE OR OFFICES FOR PRIVATE PHYSICIANS
- ADMINISTRATIVE PUBLIC HEALTH OFFICES
  - Health Officer
  - Sanitarian
  - Public Health Nurses
  - Public Health Clinics
  - Maternal and Child Health
  - Tuberculosis
  - Venereal Disease
  - Public Health Education

As far as buildings are concerned, a major effect of the plan would be seen in rural hospitals and rural health centers. Here too the plan should reach its primary objective—the extension of modern health service to now-unserved areas

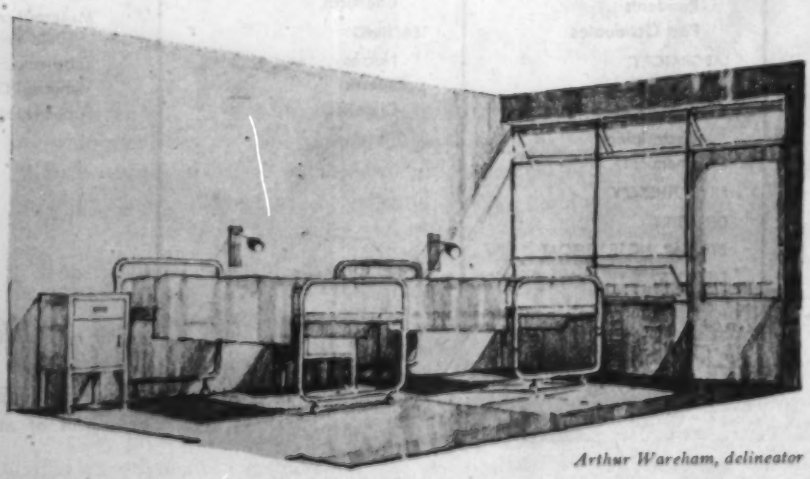
RURAL HEALTH CENTER



Stanley Reese, delineator



For an outlying health center parking space is a "must." And parking space for baby carriages, preferably on a covered terrace, is also a requirement for a health clinic. Below: a typical two-bed room in the nursing wing



Arthur Wareham, delineator

WITH 10-BED NURSING UNIT

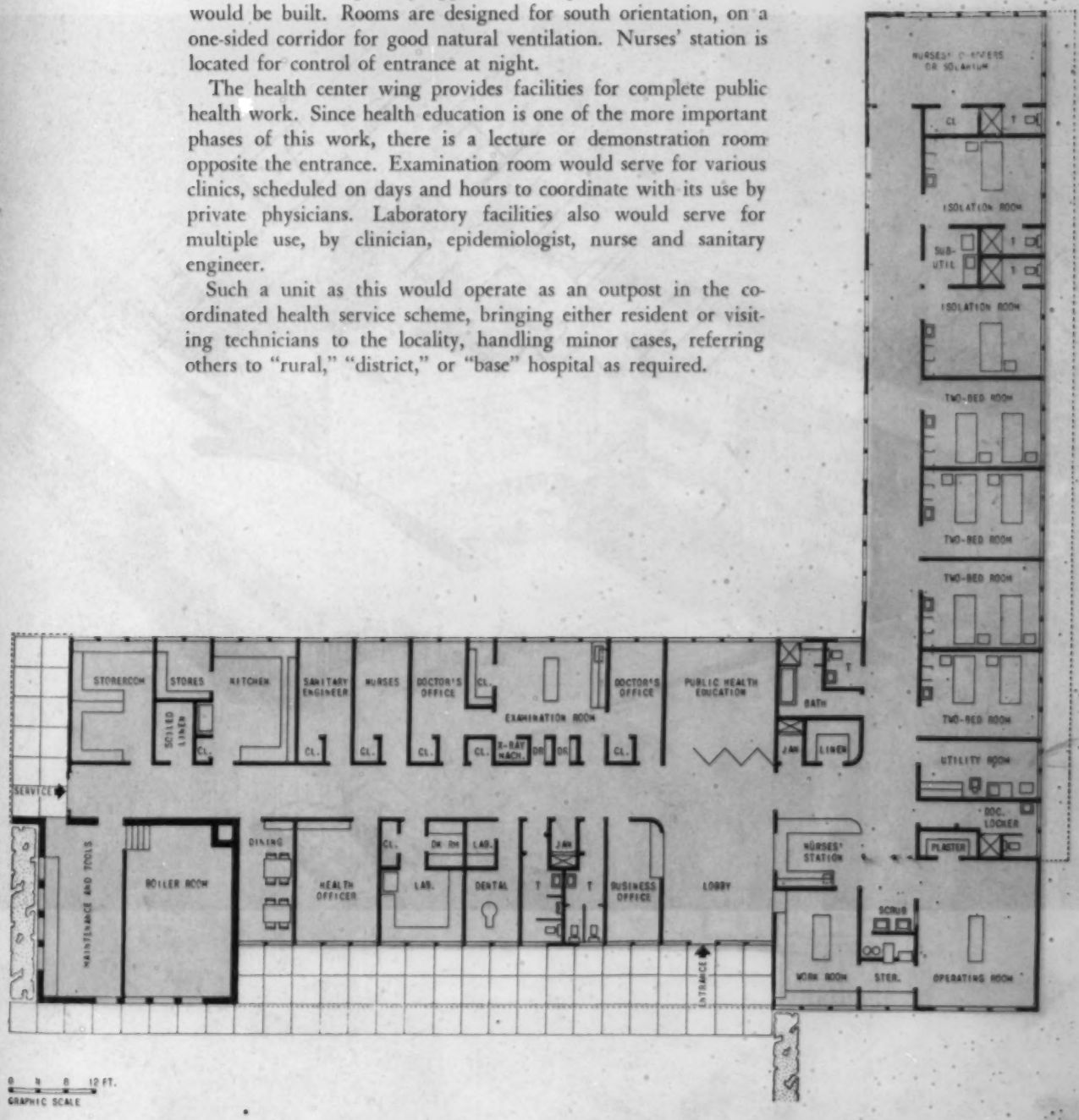
Plan suggestion by Hospital Facilities Section, U. S. Public Health Service

Too SMALL to qualify as a hospital, this outpost of the hospital service plan is intended only for rural communities which cannot support even a "rural hospital." Its primary function is to bring public health facilities to the small community; its secondary one to provide nursing service mainly for obstetrical care, plus facilities for emergency or minor surgical work. A noteworthy feature is the provision of offices and examination room for private physicians; it is anticipated that local doctors will want to avail themselves of the diagnostic facilities now so generally lacking.

The nursing unit, though small, is complete. The isolation suite should be especially appreciated in places where this unit would be built. Rooms are designed for south orientation, on a one-sided corridor for good natural ventilation. Nurses' station is located for control of entrance at night.

The health center wing provides facilities for complete public health work. Since health education is one of the more important phases of this work, there is a lecture or demonstration room opposite the entrance. Examination room would serve for various clinics, scheduled on days and hours to coordinate with its use by private physicians. Laboratory facilities also would serve for multiple use, by clinician, epidemiologist, nurse and sanitary engineer.

Such a unit as this would operate as an outpost in the coordinated health service scheme, bringing either resident or visiting technicians to the locality, handling minor cases, referring others to "rural," "district," or "base" hospital as required.

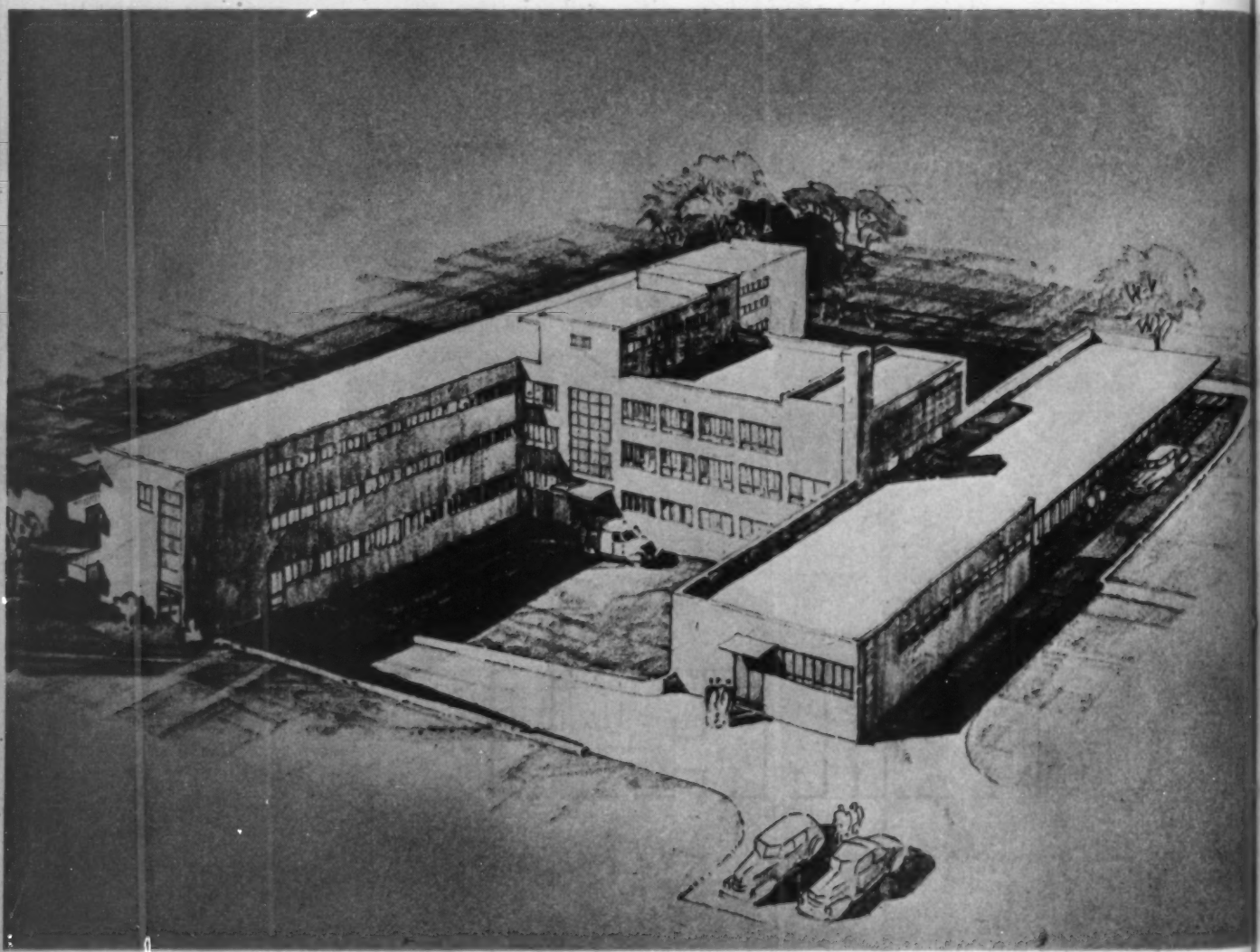


50-BED RURAL HOSPITAL

Plan suggestion by Hospital Facilities Section, U. S. Public Health Service

SUGGESTED for the second element in the coordinated hospital service plan, this "rural" hospital is considered just about the minimum size for adequate care and supervision. While this is an accredited hospital, it is not intended to handle complicated major surgery cases, which would be referred to the "district" or "base" hospital.

Incorporation of the local public health organization and facilities into the rural hospital has many advantages, whether in public or voluntary hospitals. The

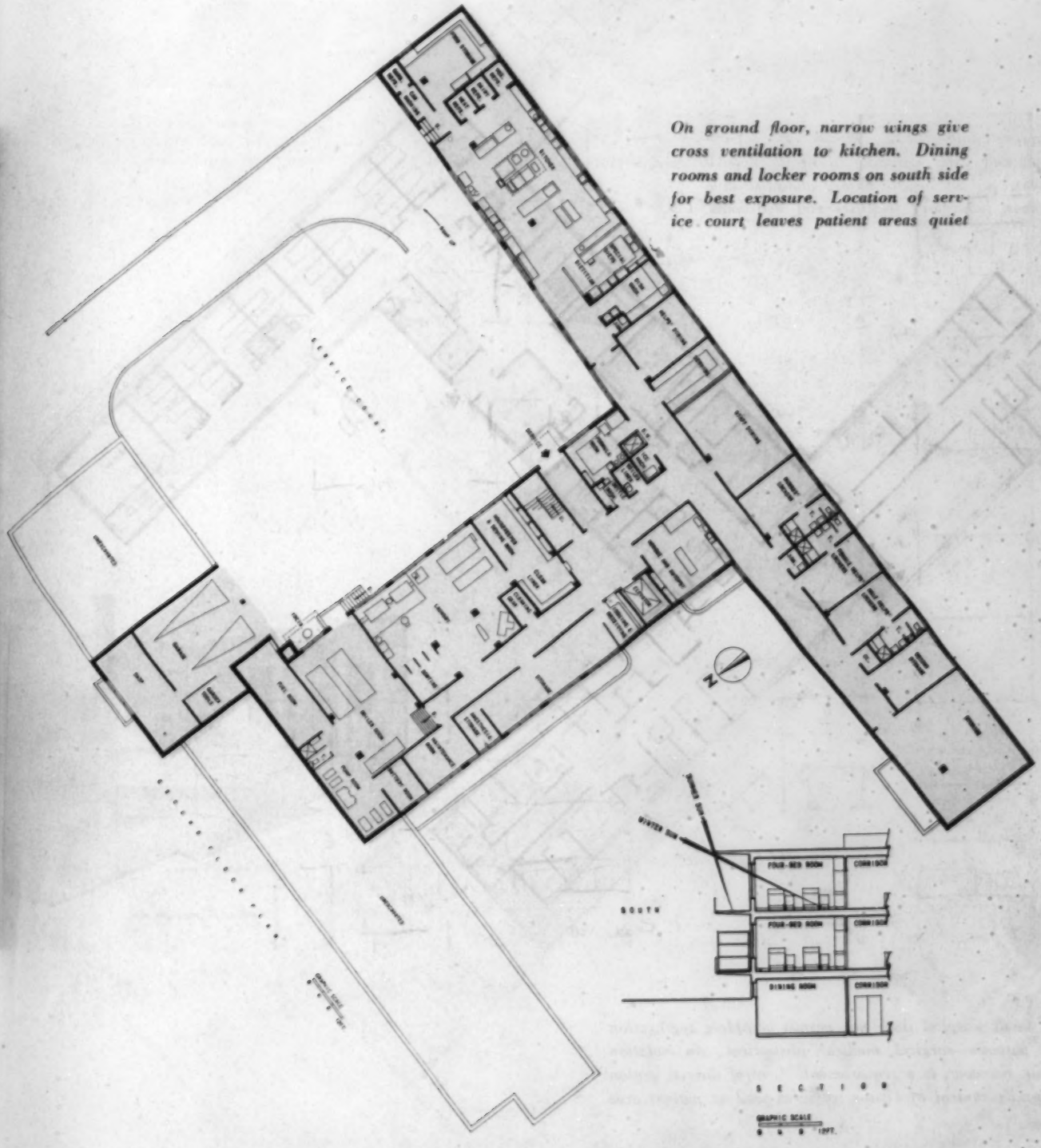


AND PUBLIC HEALTH CENTER

source of income would be broadened to include both public and private means. Public health and hospital facilities should be less expensive to provide and maintain when in combination. Where only the small hospital is possible, economy of material resources and technical personnel may be absolutely necessary to good health service.

Although not provided for in this plan, the inclusion of offices for lease to private physicians is being looked upon with increasing favor. Not only is such an arrangement advantageous to the small hospital without interns or residents, but it would also be an added inducement to physicians to locate in small communities.

Coordination of this little hospital with larger ones in the line would also be considered an inducement to physicians to practice in rural areas. Fear of professional stagnation often dissuades the young physician who might otherwise take up country practice. In the plan he would maintain contact with the big

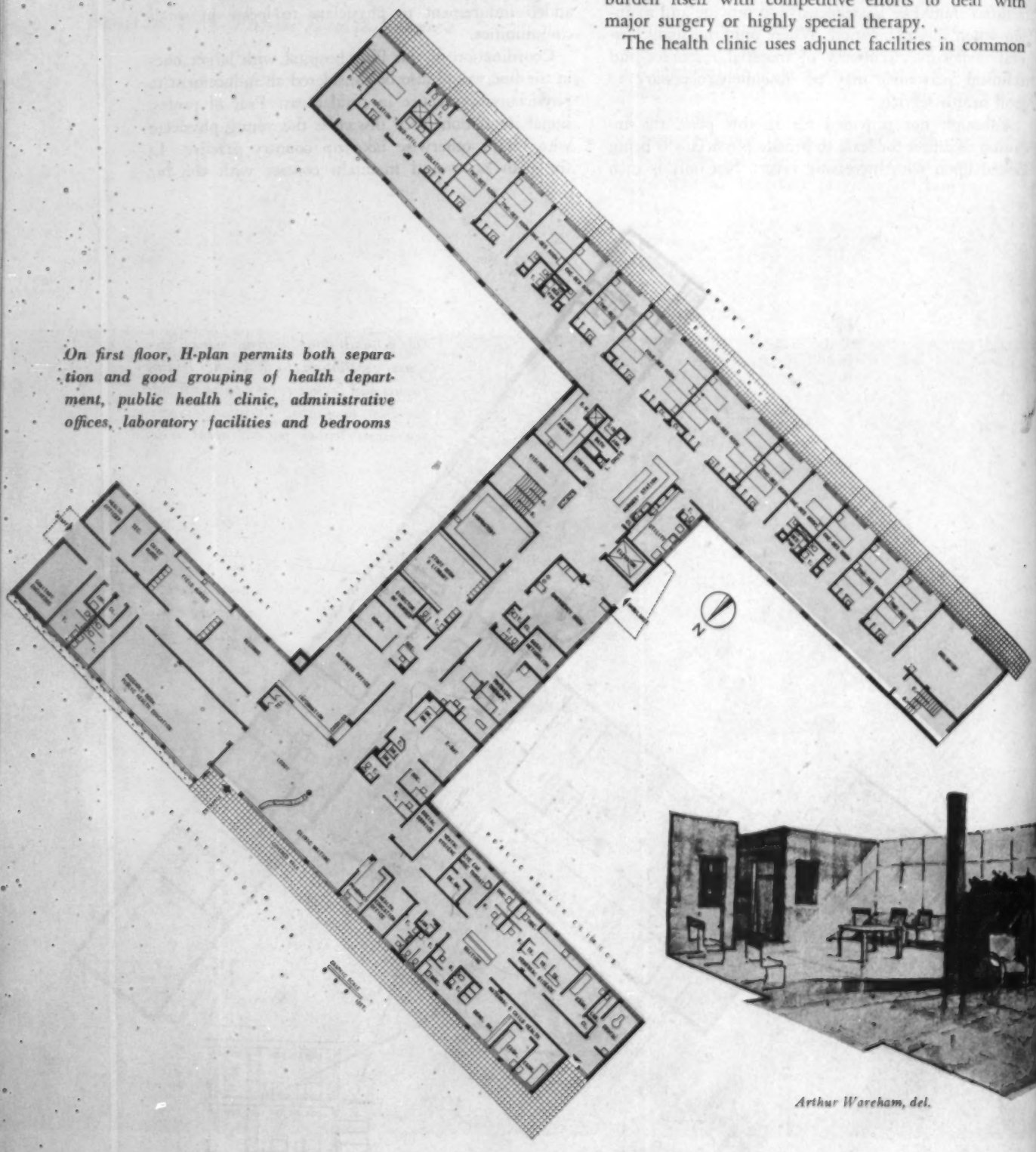


On ground floor, narrow wings give cross ventilation to kitchen. Dining rooms and locker rooms on south side for best exposure. Location of service court leaves patient areas quiet

hospitals, with their better facilities, their personnel and research.

More importantly, the advantages of coordination redound to the benefit of the rural patients. This little hospital can be planned to give perfectly adequate care to limited types of cases; it need not overburden itself with competitive efforts to deal with major surgery or highly special therapy.

The health clinic uses adjunct facilities in common



On first floor, H-plan permits both separation and good grouping of health department, public health clinic, administrative offices, laboratory facilities and bedrooms

Arthur Wareham, del.

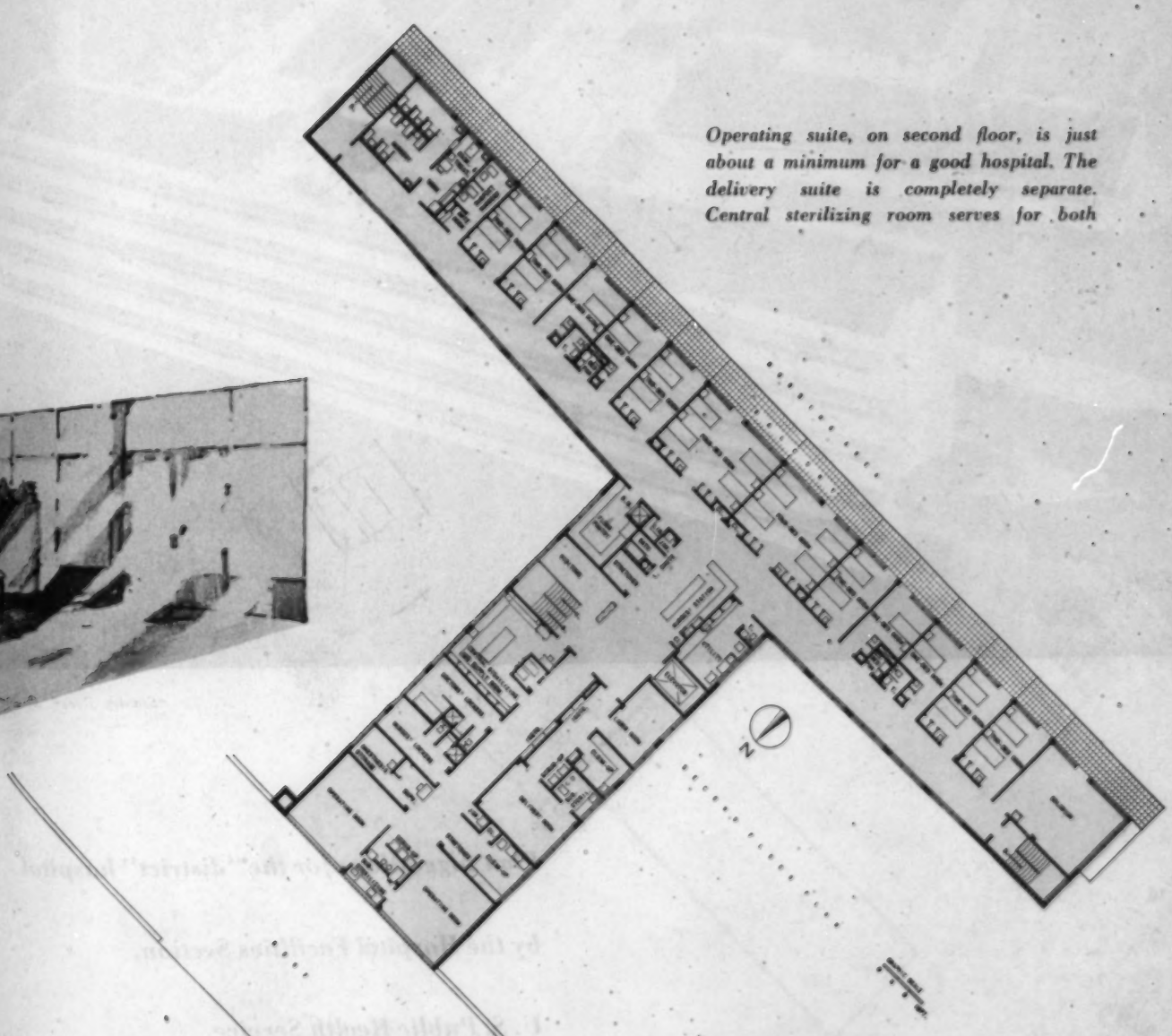
A small hospital does not permit complete segregation of patients—surgical, medical, obstetrical. An isolation unit, however, is a requirement. Central nurses' station permits control of visitor traffic as well as patient area

with the hospital. The location of x-ray, physiotherapy and like departments is such that they are equally convenient to in- and out-patients. The public health department has its own wing close to the main entrance; the assembly room for health education has its own entrance.

The building is designed with extended nursing wings, with all rooms on one side of the corridor, and all intended to face the south, and away from the rest of the building for isolation from noise.

Two court areas provided by the H-shaped plan are at different levels. Thus one becomes a service court for the service rooms on the ground floor; the other, a drive-in and turn-around for the ambulance entrance on the first floor.

While this design suggests balconies along the nursing wings, it is pointed out that hospital authorities are not in agreement as to their usefulness.

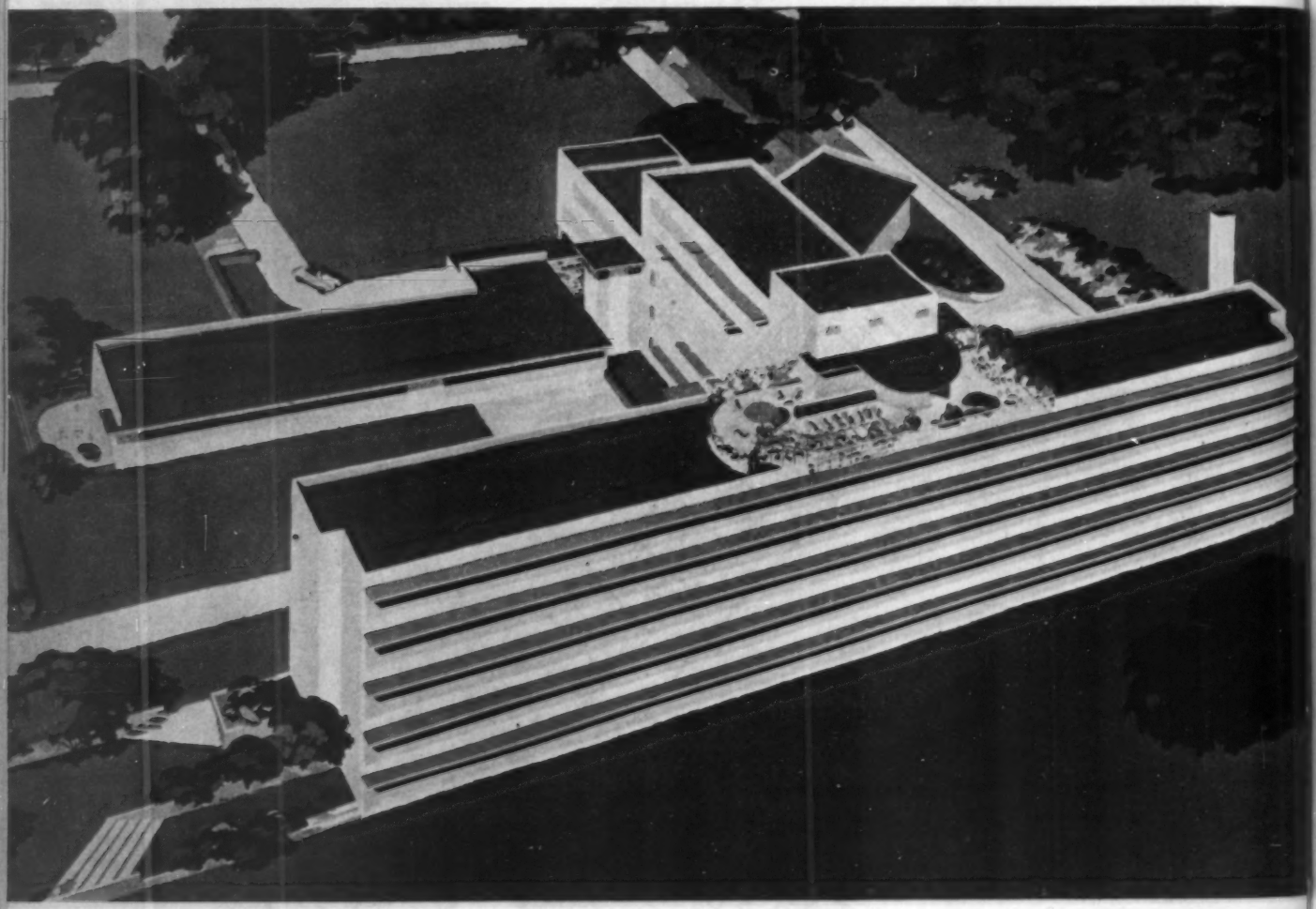


Operating suite, on second floor, is just about a minimum for a good hospital. The delivery suite is completely separate. Central sterilizing room serves for both

200-BED HOSPITAL

THE accompanying plan is suggested as the third element of a coordinated system—the so-called "district" hospital. Such a facility typifies the concept of the active urban general hospital of two hundred or more beds, in which practically complete diagnosis and treatment are available. As members of its staff one would expect to find outstanding representatives of the medical profession in its various specialties.

Approved internships, residencies, and a school of nursing would constitute its teaching facilities, although informal refresher courses on a limited scale might be available to physicians from the smaller hospitals and from the rural areas, thereby establishing a basis of understanding and cooperation which would materially aid in maintaining an elevated standard of care in the outlying areas, which is one of the principal objectives in the



Stanley Reese, del.

Plan suggestions for the "district" hospital

by the Hospital Facilities Section,

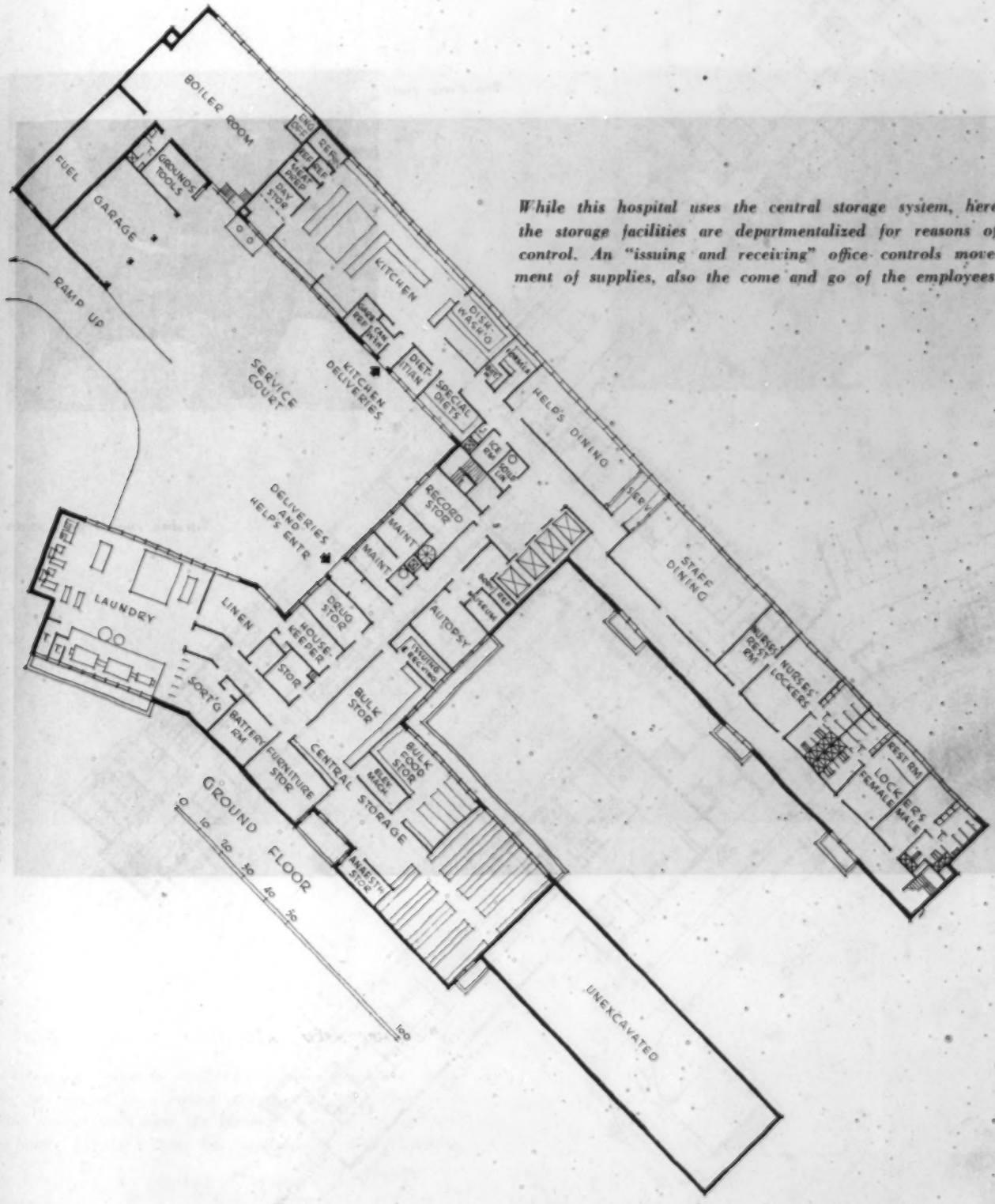
U. S. Public Health Service

FOR THE LARGE URBAN DISTRICT

coordinated hospital service plan.

Incidentally, a 200-bed hospital is a fairly large one. It is not expected that a large number will be built immediately for the inauguration of the coordinated plan suggested by the Health Service. Many existing institutions could be fitted into the plan. There are many excellent ones ideally suited to perform the functions here suggested, but it is anticipated that others in this category will, in time, require replacement, and that in other areas entirely new hospitals will be necessary. Whether the new ones will be fully as large as this is open to some doubt, but a 200-bed size was chosen for this "district" hospital because it would be difficult to include all the desired facilities in a hospital much smaller.

The staff and clinical facilities of the district hospital should be adequate to handle competently practically all



While this hospital uses the central storage system, here the storage facilities are departmentalized for reasons of control. An "issuing and receiving" office controls movement of supplies, also the come and go of the employees

types of major and minor surgery, obsetetrics, internal medicine, pediatrics, eye, ear, nose, and throat conditions, dentistry, physiotherapy and industrial medicine and surgery. Ordinary communicable diseases, including venereal, would be cared for, and at least the primary diagnosis and initial treatment of tuberculosis and neuropsychiatric conditions. In order properly to discharge these functions, an approved x-ray, pathology, bacteriology, and chemical laboratory would be required.

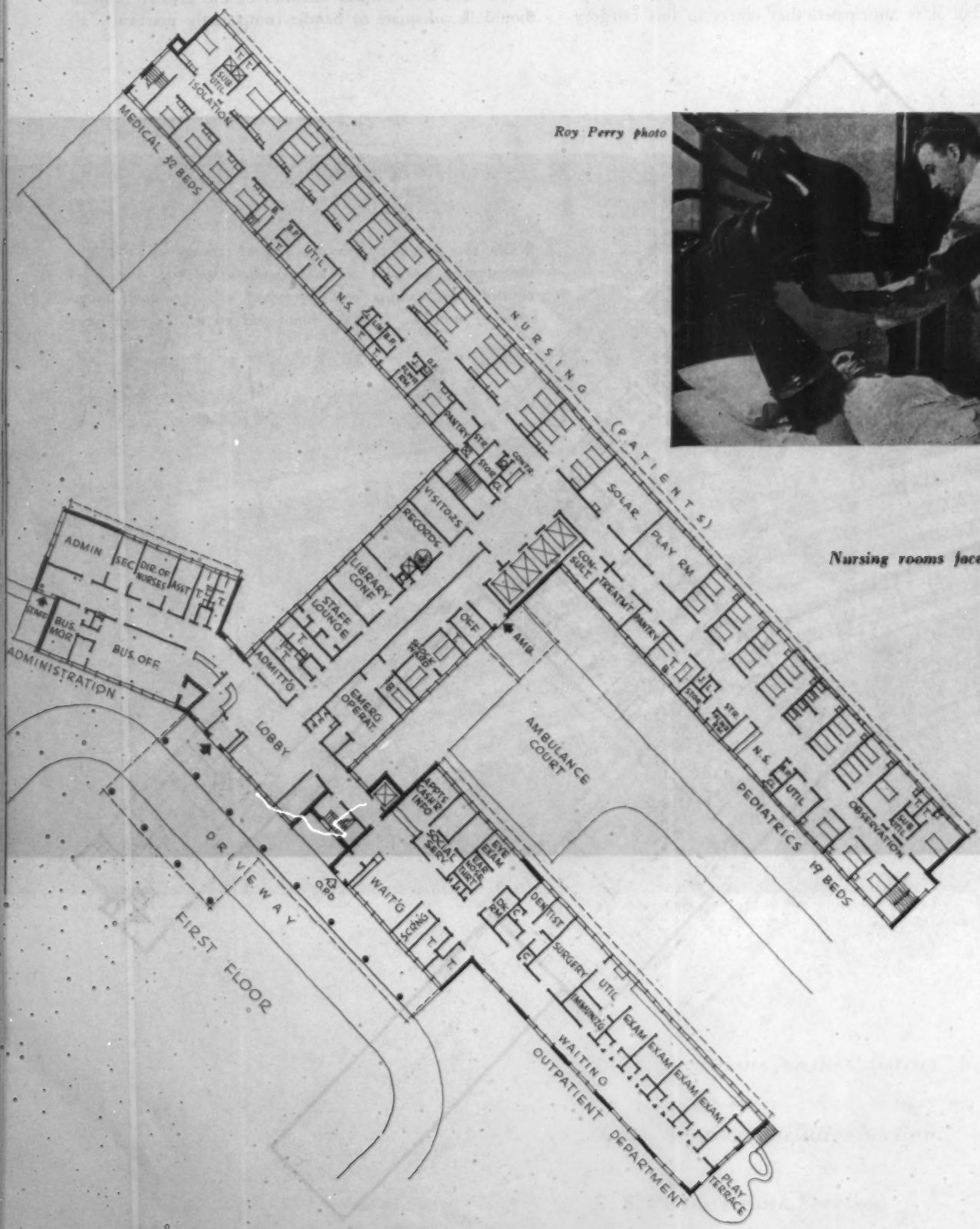
The accompanying plan, while shown in considerable detail, is suggestive only, like the others, and will require modification and adaptation to specific conditions encountered by the local architect for an actual project.

Again medical offices for private practitioners are included in the plan (second floor). While in a large hospital, presumably in an urban center, it would not be so necessary as in a small community for doctors to have their offices right in the hospital, the idea still has advantages. The physician would be close not only to his hospitalized patients, but also to the various facilities for diagnosis and treatment.

While the open plan is again used, with nursing rooms ranged along the south side, for both noise isolation and sunlight, the wing is deepened to accommodate utility

Roy Perry photo

Nursing rooms face south

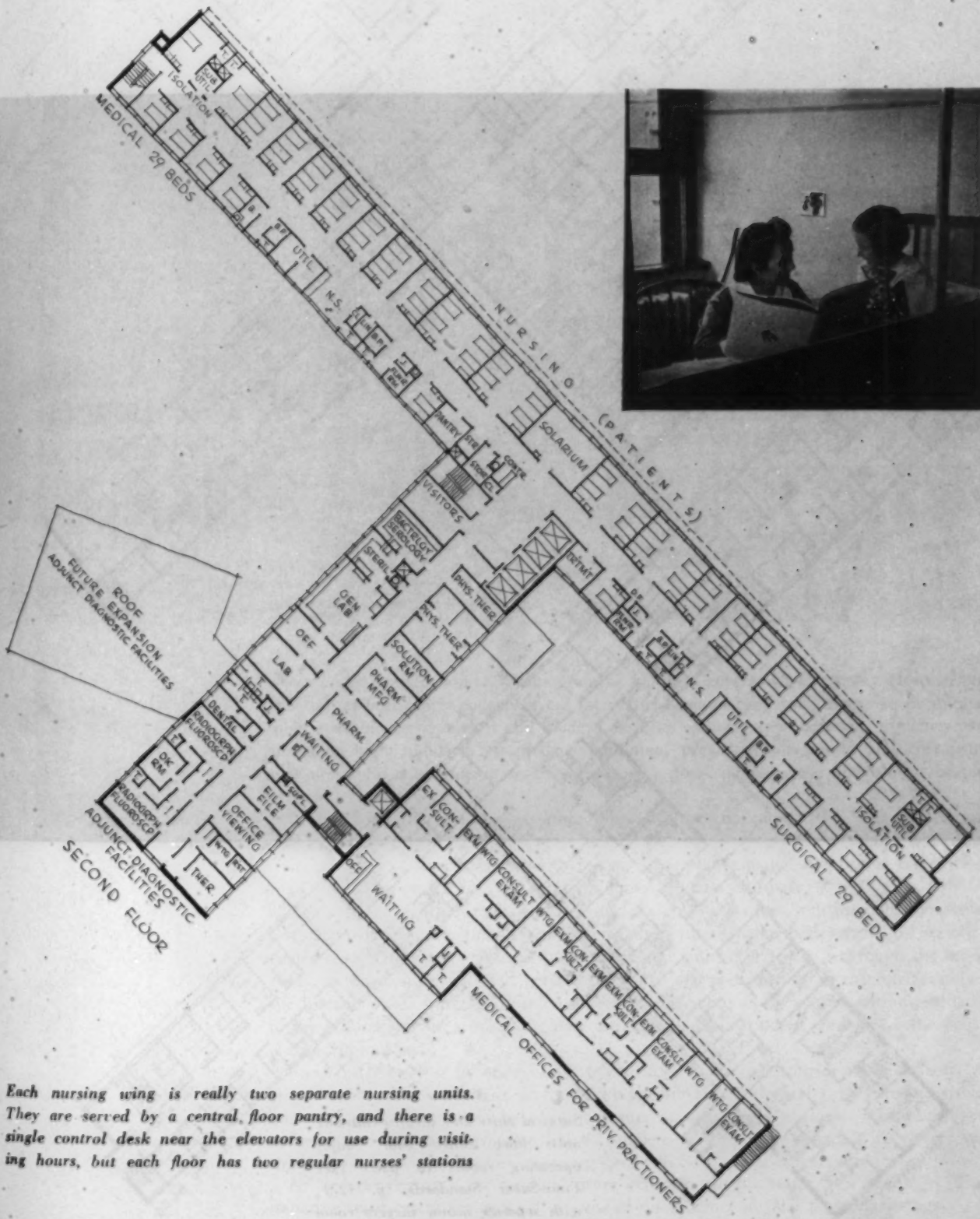


rooms on the other side of the corridor. Size of the wings precludes keeping all utility rooms centrally located, hence the device of the "offset" corridor.

Here again the departmentalization by wings is carried out. The H form on the lower floors permits the grouping of separate wing sections around a central focus while concentrating bedrooms along the south. These wings at the north are limited in height to present requirements for departmental space; it is contemplated that upward extension is possible should expansion later prove advisable.

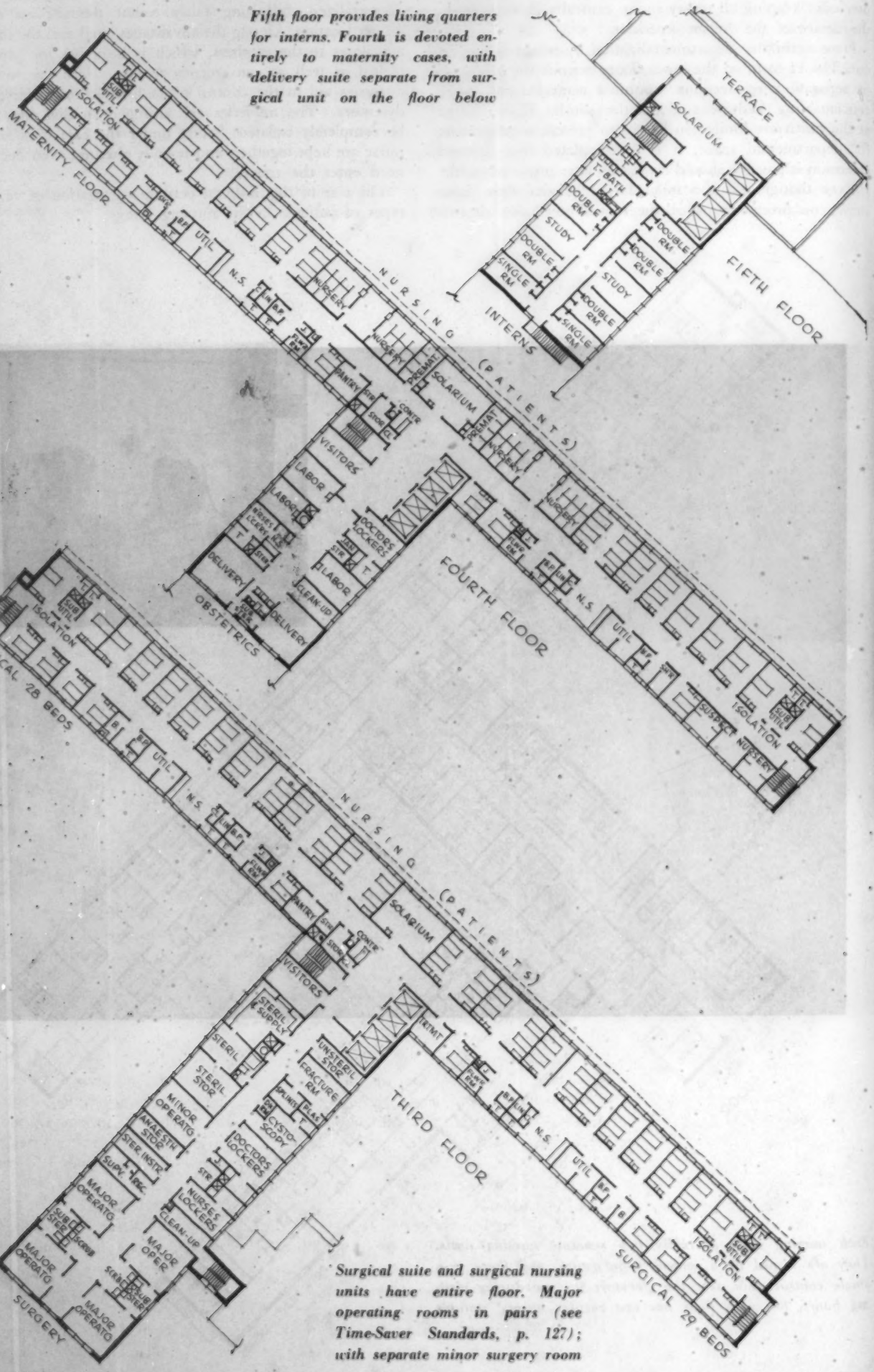
Even though this is a much larger hospital than those shown on preceding pages, the central sterilizing department plan is continued. On the other hand, nurseries are decentralized, following fairly recent thought on their proper location. Among the advantages cited are: the babies are closer to the mothers, which is desirable for psychological as well as convenience reasons. Also the smaller nurseries aid in the control of such infectious diseases as dysentery. The nurseries are arranged so that they can be completely isolated; babies under the care of a single nurse are kept together, and nobody else, not even doctors, need enter the room.

The size of this hospital permits segregation of various types of patients in the nursing wings.



Each nursing wing is really two separate nursing units. They are served by a central floor pantry, and there is a single control desk near the elevators for use during visiting hours, but each floor has two regular nurses' stations

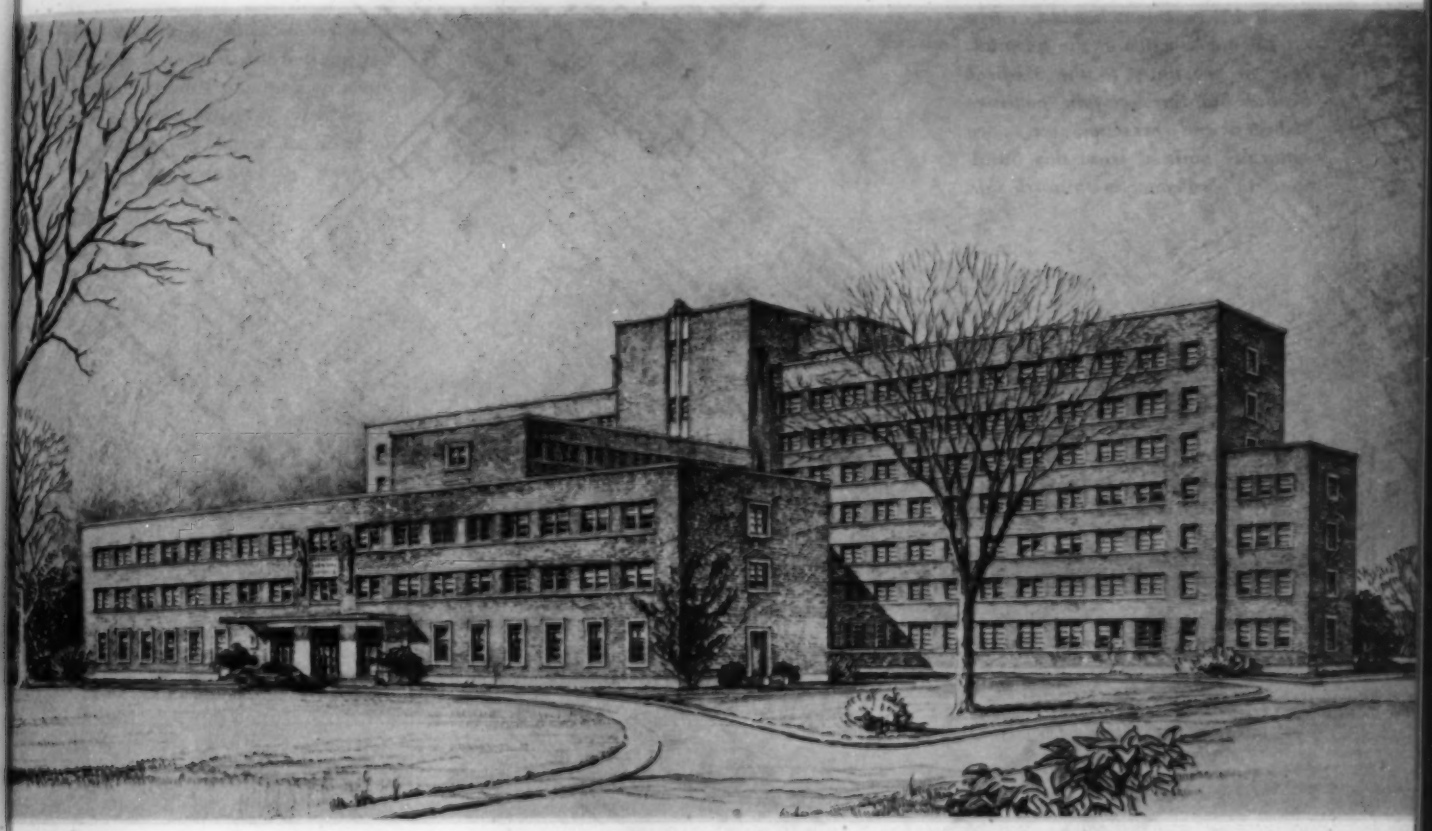
Fifth floor provides living quarters for interns. Fourth is devoted entirely to maternity cases, with delivery suite separate from surgical unit on the floor below



Surgical suite and surgical nursing units have entire floor. Major operating rooms in pairs (see Time-Saver Standards, p. 127); with separate minor surgery room

THE GEORGETOWN UNIVERSITY HOSPITAL

At Washington, D. C., an example of the "base" or teaching hospital in the service plan. Kaiser, Neal & Reid, Architects, in cooperation with the Federal Works Agency and the Public Buildings Administration, and in consultation with the U. S. Public Health Service



Now under construction at Washington, D. C., the Georgetown University Hospital typifies the medical center concept in an integrated hospital program. Attached or immediately available are specialists and modern facilities of every type necessary to achieve and maintain high standards of medical education, preventive diagnostic and therapeutic measures. Such an institution thus becomes a focal point in the network of hospital and clinic facilities.

In execution the building is rather unusual since the construction was started long before the drawings were finished, due to the emergency nature of the FWA grant. The design is as simple as possible an expression of the plan. Exterior is red brick to match the adjacent Medical School, with limestone trim and base.

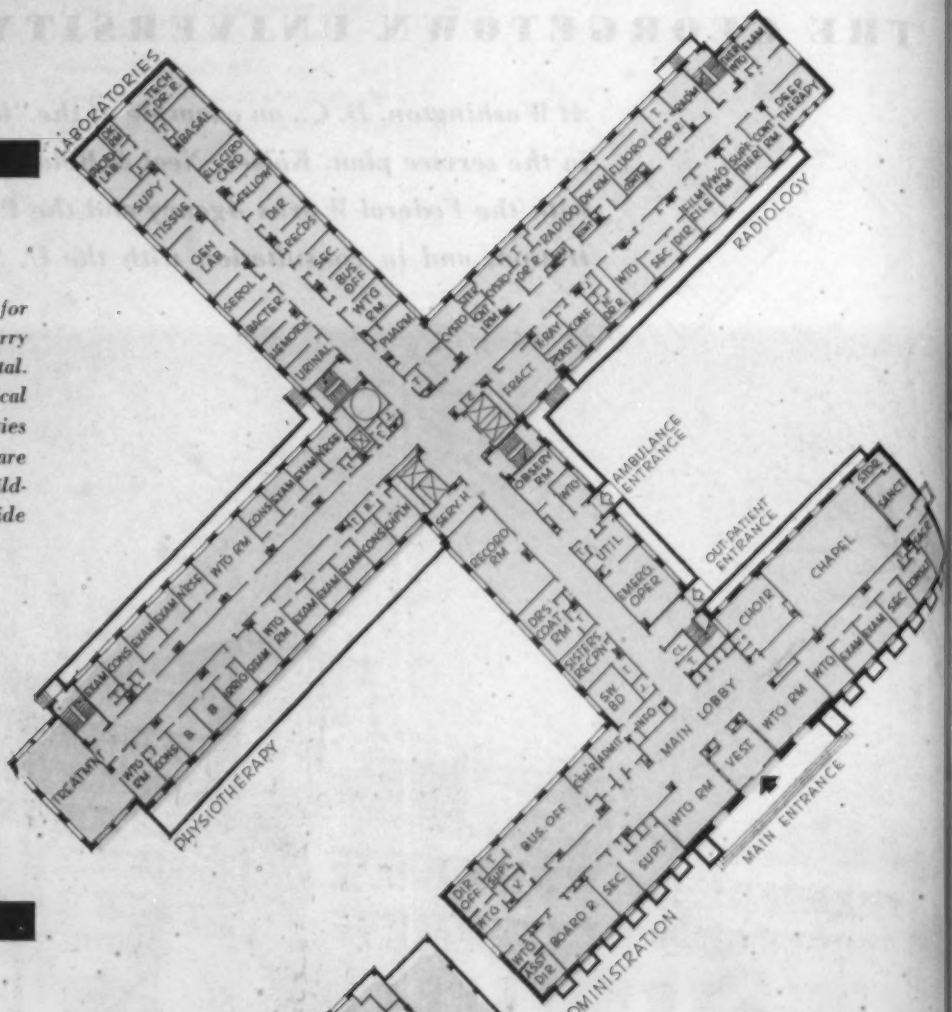
The plan was laid out to separate as much as possible various functions not compatible, but to provide an integrated circulation between interdependent departments. Service is centrally located, yet is separated from public and patients. Access is through the service court, at basement level. Refrigerated foods are delivered directly to the refrigerators in the kitchen; other bulk foods and supplies are delivered at the service entrance adjacent to the general storage area, where they are issued and distributed, and where the help is checked in and out.

Food distribution is by heated bulk food trucks to serving pantries on each floor. An elevator connects the pantries directly with the kitchens. Central supply and pharmacy are connected to each floor by a dumb waiter at the nurses' stations. The nurses' call system is to be of the conventional type, supplemented by voice system with voice return from nurses' stations. Doctors' paging system will be of the audible type.

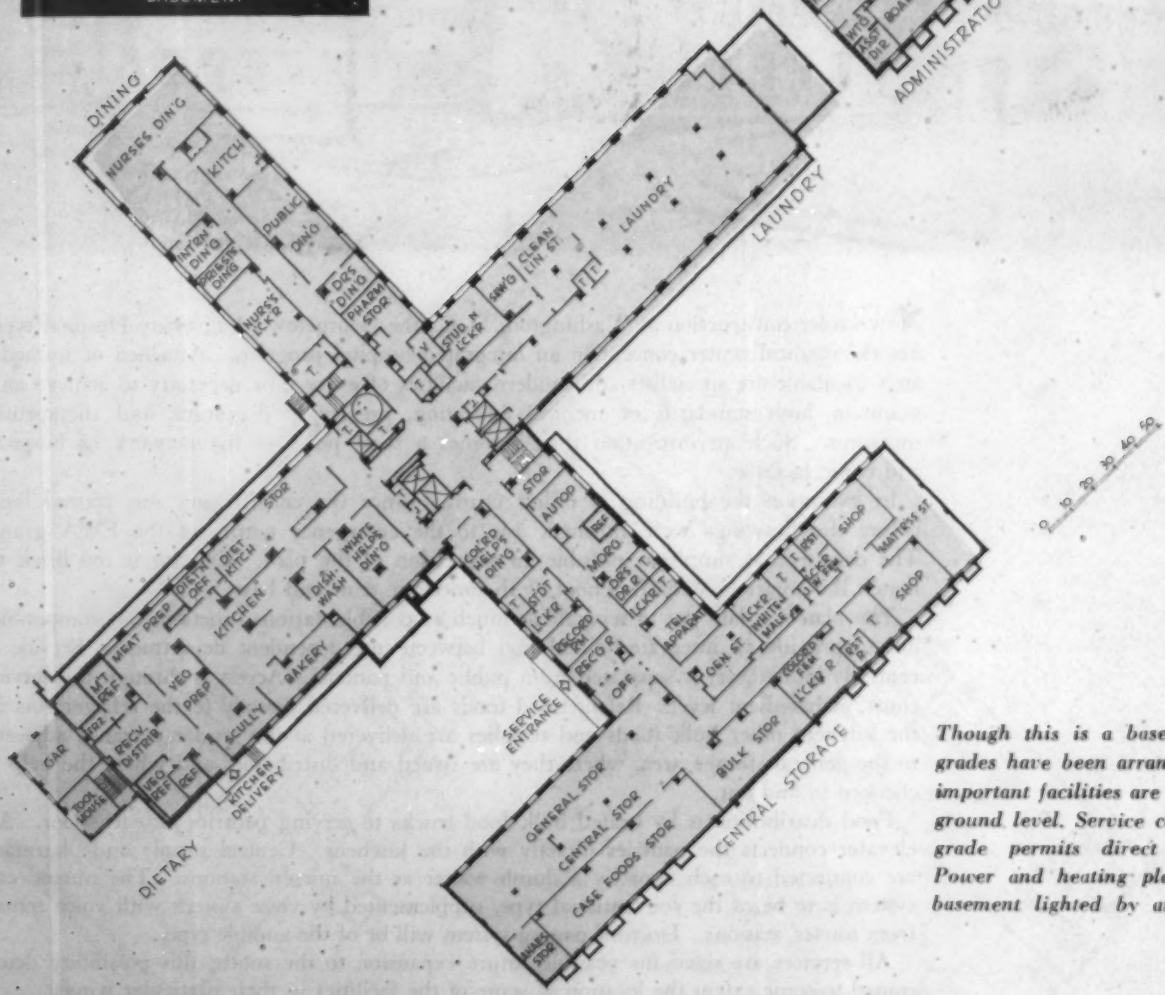
All services are sized for possible future expansion to the south; this possibility determined to some extent the location of some of the facilities in their particular wings.

FIRST FLOOR

First floor contains office space for medical department heads to carry on private practice at the hospital. Due to proximity to the Medical School building, certain facilities (library and museum, etc.) are naturally omitted from this building. Main entrance is on north side



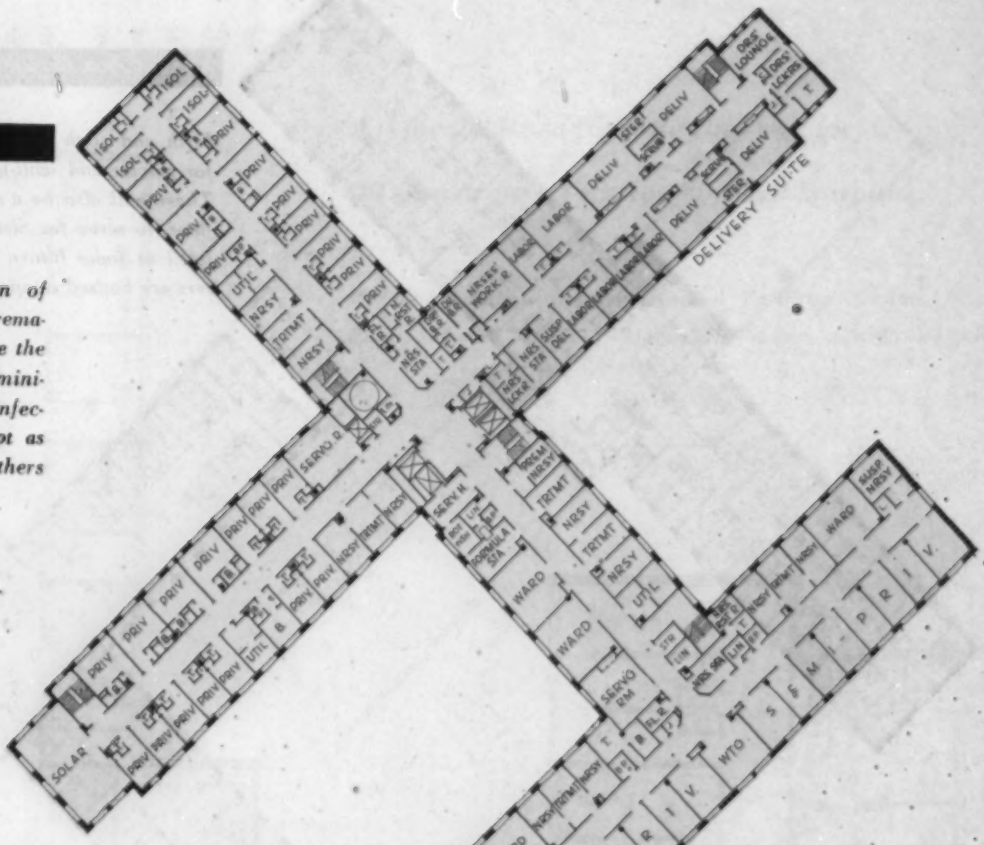
BASEMENT



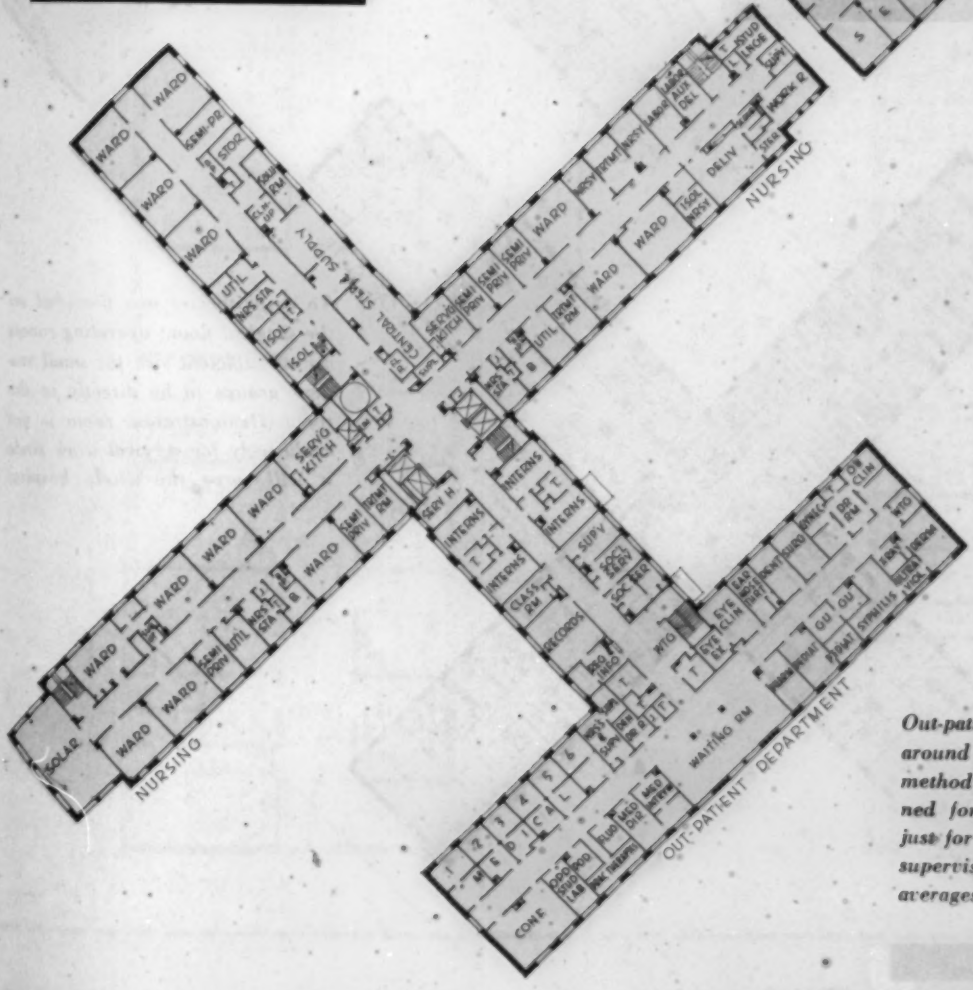
Though this is a basement floor, grades have been arranged so that important facilities are virtually at ground level. Service court at this grade permits direct deliveries. Power and heating plant in sub-basement lighted by areas shown

THIRD FL (MATERNITY)

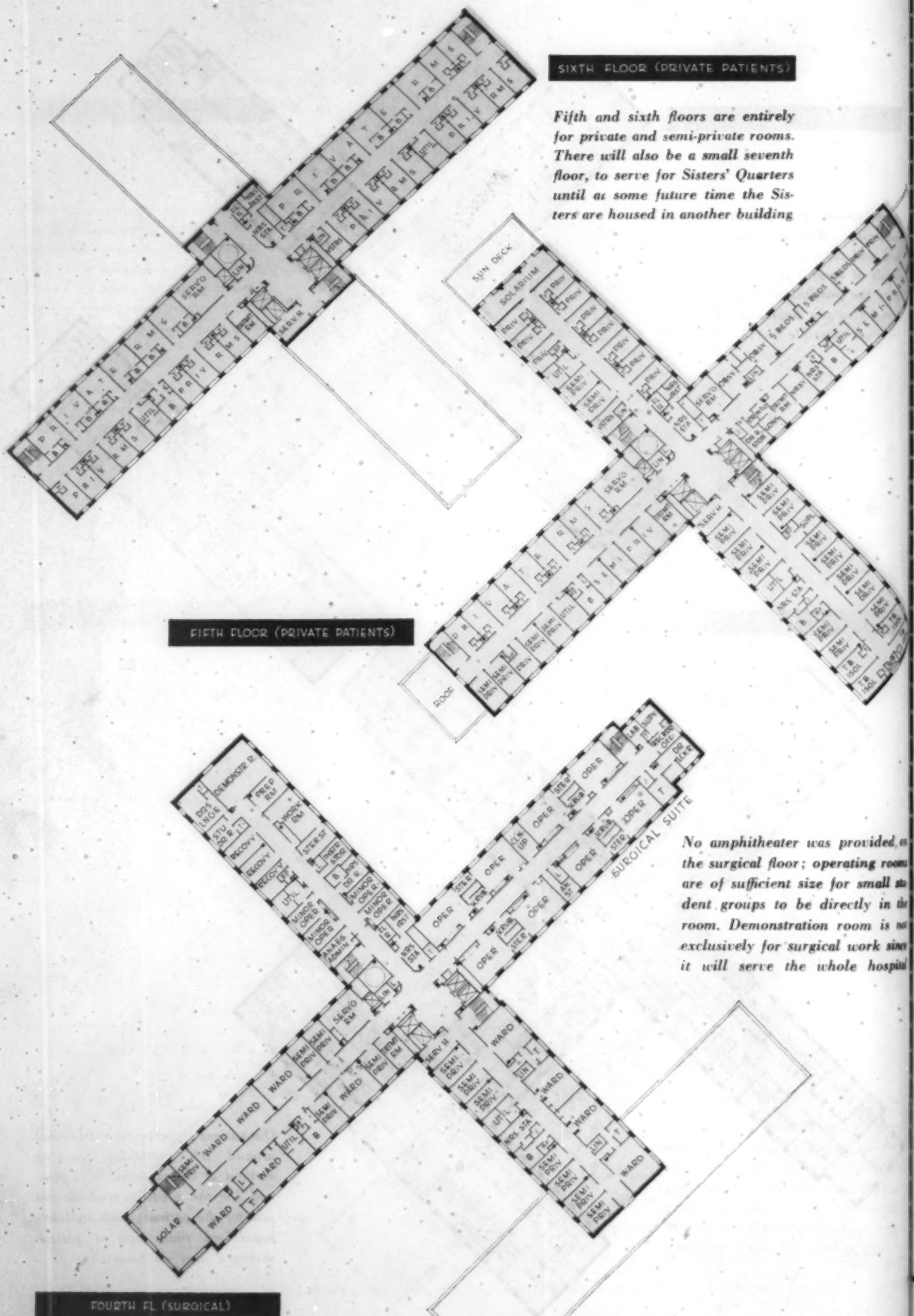
Arrangement and distribution of nurseries (also isolation, premature and suspect nurseries) are the result of careful planning to minimize the possibility of cross infection. Also the babies are kept as close as possible to the mothers



SECOND FLOOR



Out-patient Department is designed around the particular teaching method at Georgetown. It is planned for the medical student, not just for the patient; each student's supervised time with a patient averages over an hour



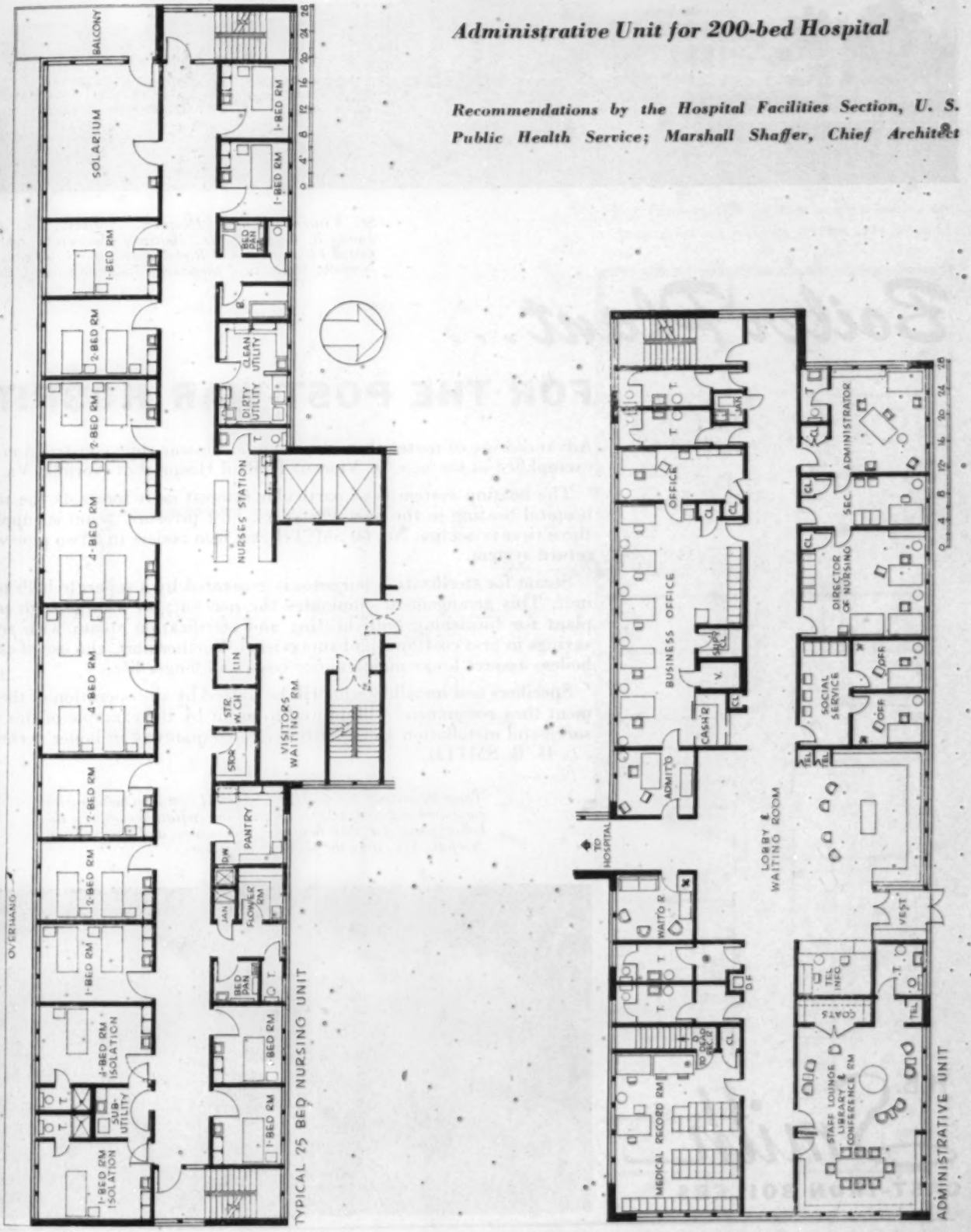
Fifth and sixth floors are entirely for private and semi-private rooms. There will also be a small seventh floor, to serve for Sisters' Quarters until at some future time the Sisters are housed in another building

No amphitheater was provided on the surgical floor; operating rooms are of sufficient size for small student groups to be directly in the room. Demonstration room is not exclusively for surgical work since it will serve the whole hospital

HOSPITAL ELEMENTS

A typical 25-bed Nursing Unit and an Administrative Unit for 200-bed Hospital

Recommendations by the Hospital Facilities Section, U. S. Public Health Service; Marshall Shaffer, Chief Architect



St. Vincent DePaul Hospital, Norfolk, Va. Architect: James R. Edmunds, Jr., Baltimore; associate architects: T. David Fitzgibbons and Rudolf Cook and VanLenuven, Inc., Norfolk. Mechanical Engineers: Egli and Gompf, Baltimore.

Boiler Plant...

FOR THE POST-WAR HOSPITAL

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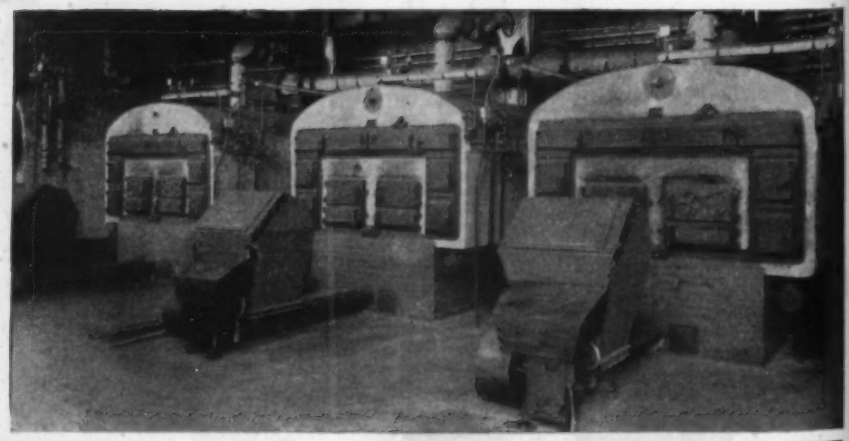
Three 20-section No. 60 H. B. SMITH cast-iron boilers with combined output of 60,000 sq. ft. steam radiation comprise the boiler plant for this new hospital. Coley and Peterson of Norfolk, Va., were the heating contractors.



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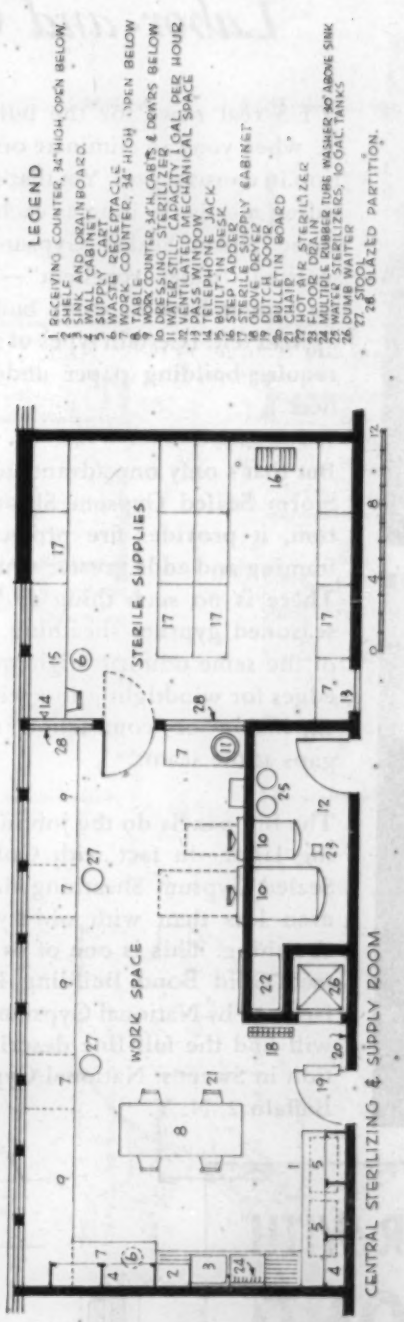
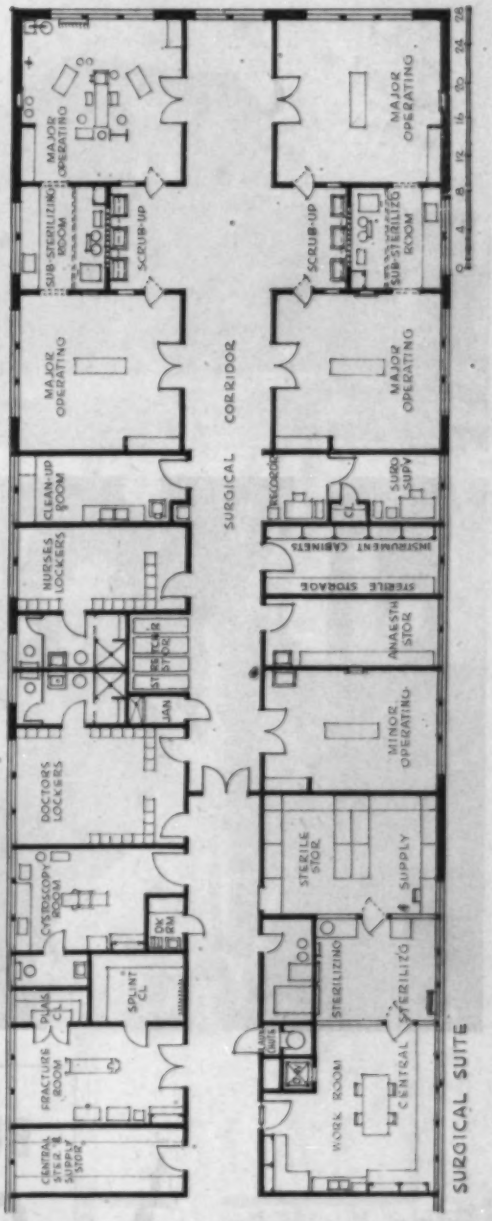
HOSPITAL ELEMENTS

Central Sterilizing and Supply Room, and Surgical Suite for 200-bed Hospital

Recommendations by the Hospital Facilities Section, U. S. Public Health Service; Marshall Shaffer, Chief Architect

For further data on the surgical suite, see ARCHITECTURAL RECORD, August 1944, page 68





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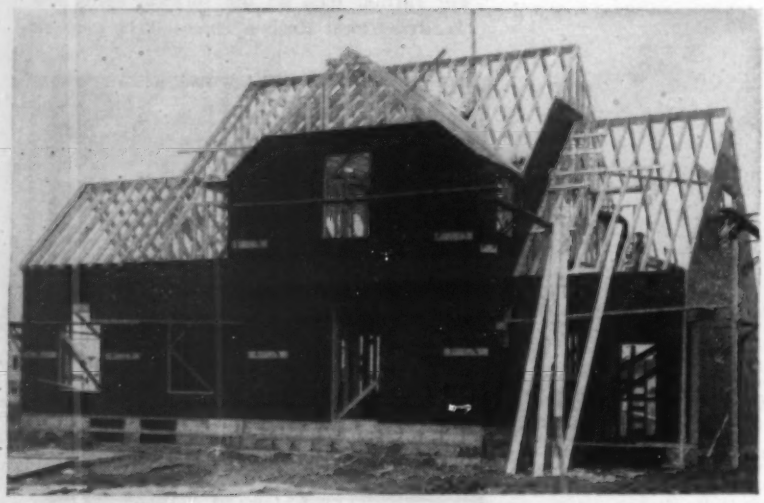

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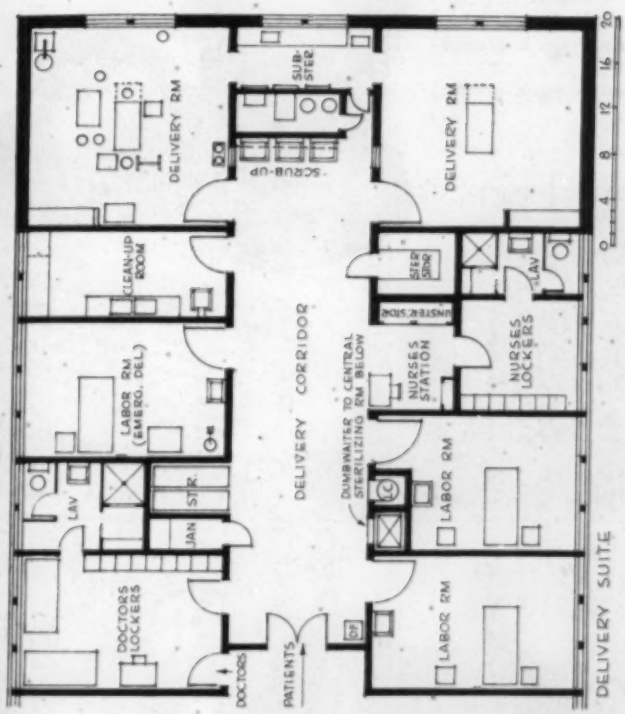
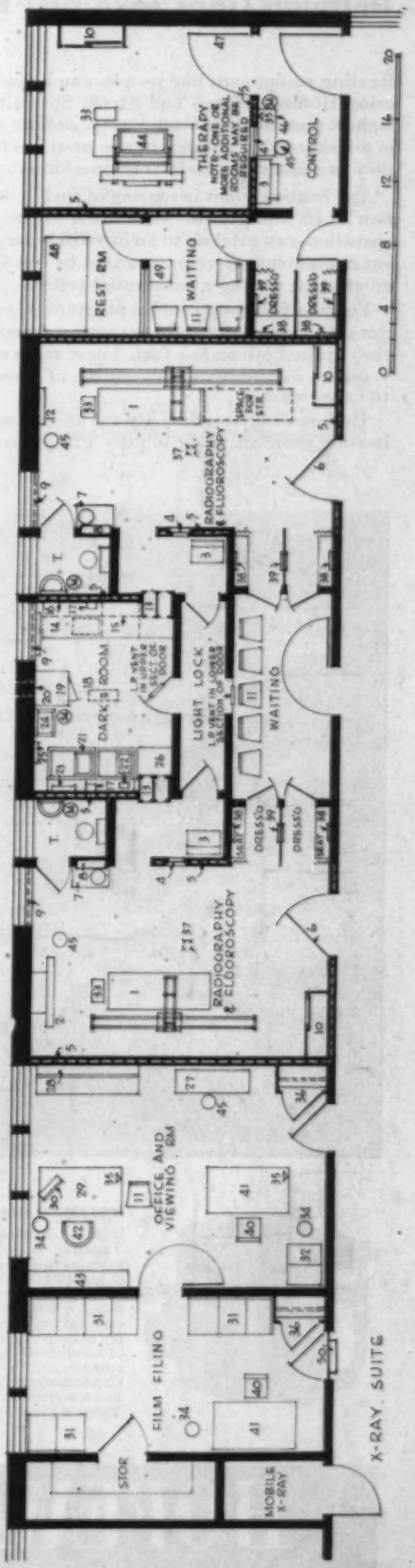
HOSPITAL ELEMENTS

Delivery and X-Ray Suites for 200-bed Hospital

Recommendations by the Hospital Facilities Section, U.S. Public Health Service; Marshall Shaffer, Chief Architect





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14. WALL CABINET, 6'-6" FROM FLOOR
15. FILM HANGER RACKS
16. SAFE LIGHT
17. CEILING FIXTURE, COMB. WHITE AND RED
18. FILM DRYER
19. FILM DRYER EXHAUST
20. DEVELOPING TANK WITH THERMOSTATIC MIXING VALVE
21. TIMER
22. ILLUMINATOR, WALL MOUNTED
23. SINK
24. TOWEL BAR
25. REFRIGERATING UNIT
26. STEREOSCOPE
27. WALL MOUNTED ILLUMINATORS, 2 UNITS OF 4 EACH
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30. FILING CABINET FOR X-RAY FILMS, 3 DRAWERS
31. FILING CABINET, LETTER SIZE, 4 DRAWERS
32. FOOT STOOL
33. TABLE, PAPER RECEPTACLE
34. TELEPHONE OUTLET
35. CLOTHES CLOSET
36. FLUOROSCOPIC CEILING LIGHT
37. HOOK STRIP
38. MEDICINE CASE
39. STENOGRAPHERS CHAIR
40. STENOGRAPHERS DESK
41. SWIVEL CHAIR
42. BOOKCASE
43. ROAD THERAPY MACHINE
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46. LEAD LINED DOOR
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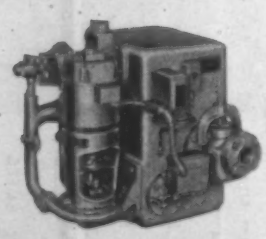

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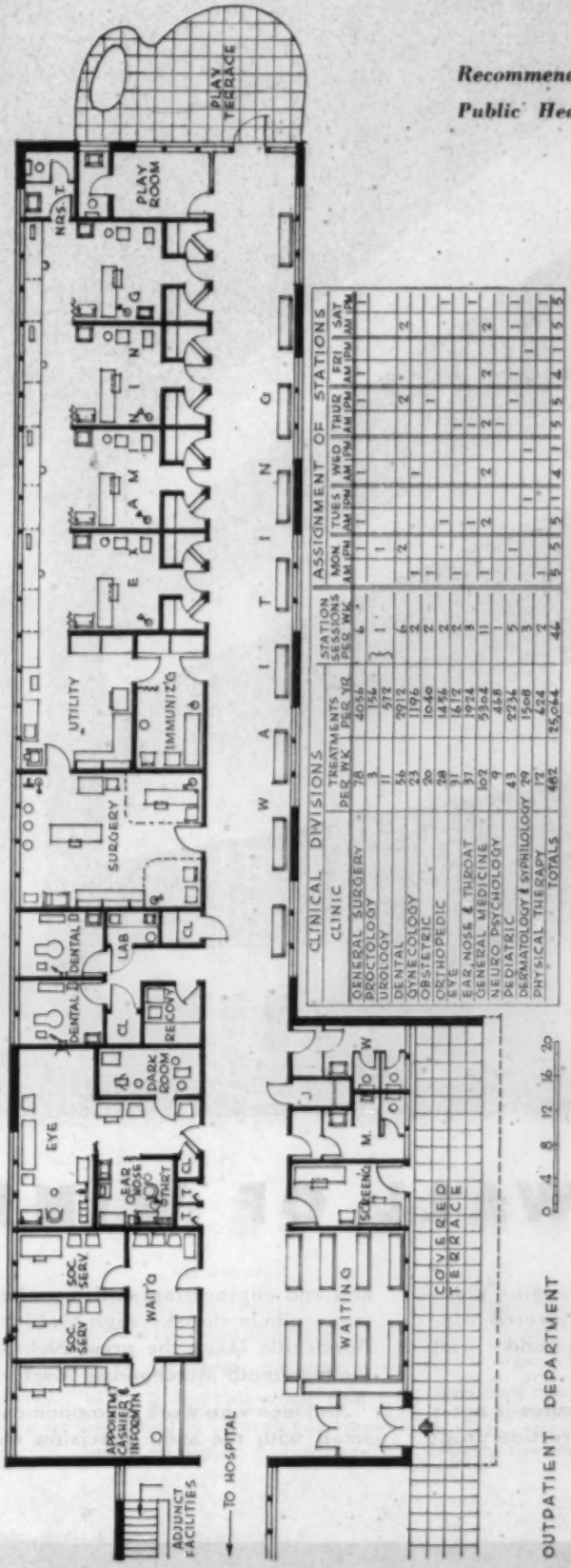
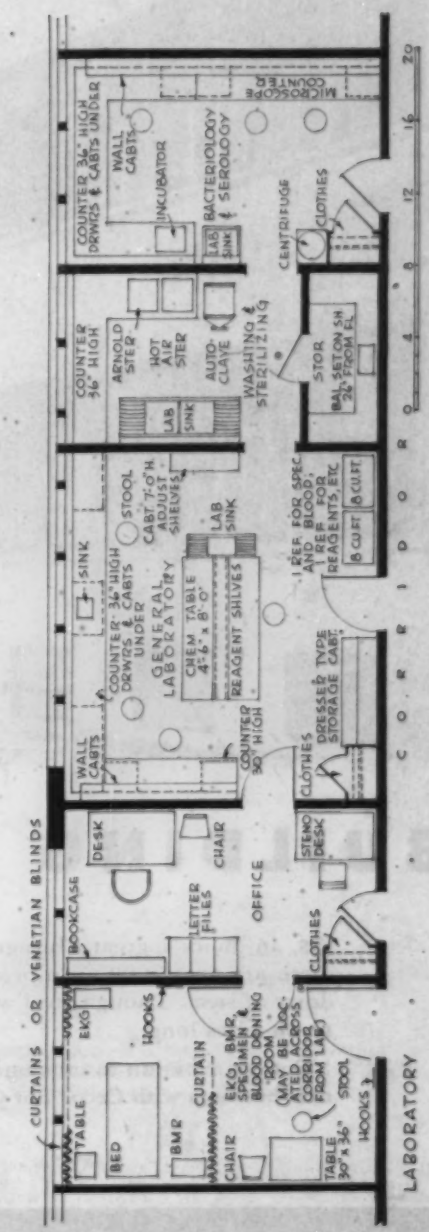
HOSPITAL ELEMENTS

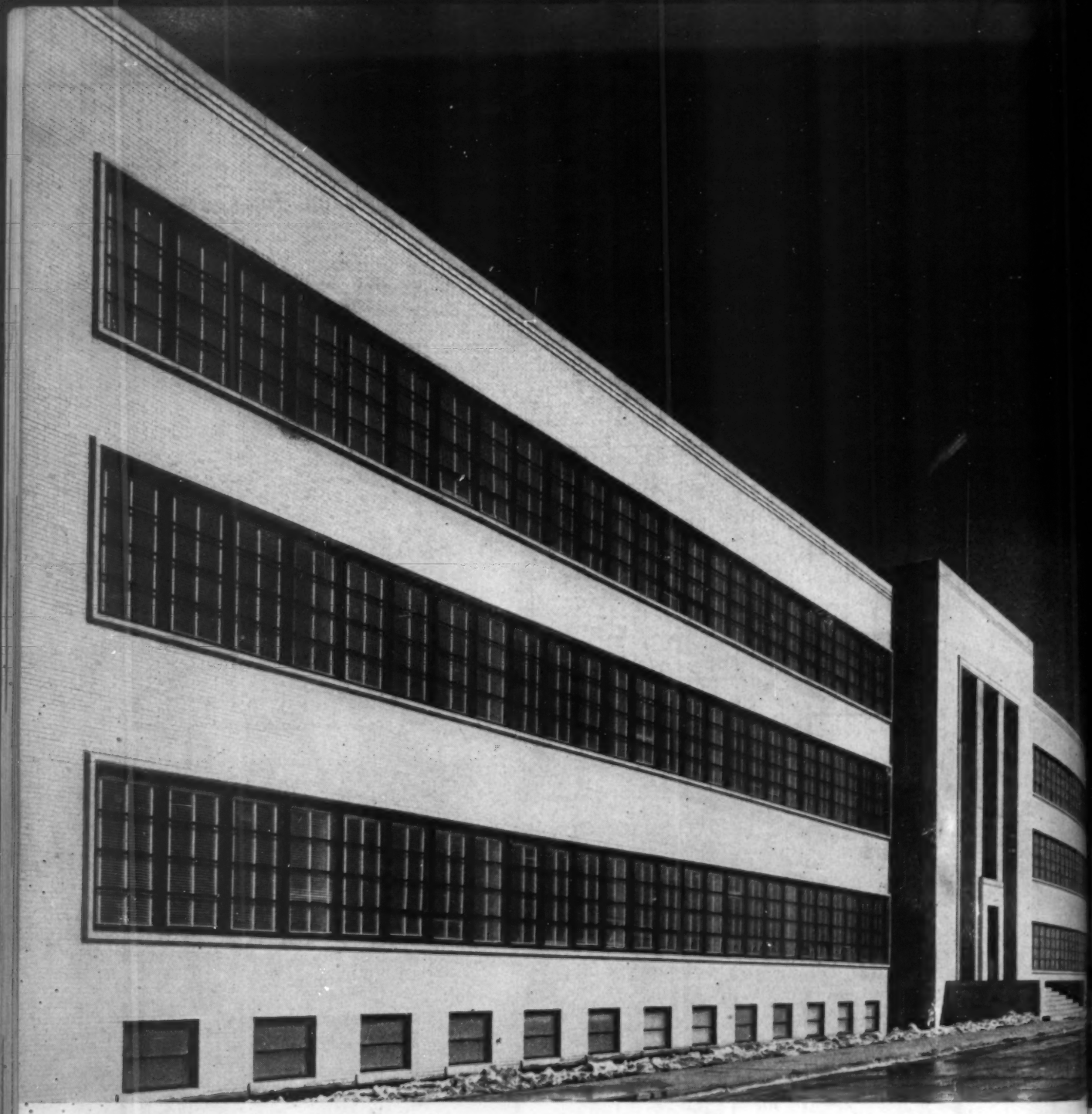
Outpatient and Laboratory for 200-bed Hospital

Recommendations by the Hospital Facilities Section, U. S. Public Health Service; Marshall Shaffer, Chief Architect



CLINICAL DIVISIONS			STATION SESSIONS PER WK	ASSIGNMENT OF STATIONS													
CLINIC	TREATMENTS PER WK	TREATMENTS PER YR		MON AM	MON PM	TUES AM	TUES PM	WED AM	WED PM	THUR AM	THUR PM	FRI AM	FRI PM	SAT AM	SAT PM
GENERAL SURGERY	78	4056	6												
PROCTOLOGY	3	156													
UROLOGY	11	572	1			1									
DENTAL	56	2912	6			2									
GYNECOLOGY	23	1196	2					1			2		2		
OBSTETRIC	20	1040	2					1			1				
ORTHOPEDIC	28	1456	2			1									
EYE	31	1612	2			1					1				
EAR, NOSE & THROAT	37	1924	3			1		2		2		2		2	
GENERAL MEDICINE	102	5304	11			1		2		2		2		2	
NEURO PSYCHOLOGY	9	468	1							1		1		1	
PEDIATRIC	43	2236	5			1									
DERMATOLOGY & SYPHILOLOGY	29	1508	3					1				1		1	
PHYSICAL THERAPY	172	624	2	1		5	5	11	4	11	5	5	4	1	5
TOTALS	482	25,064	46	5		5	5	11	4	11	5	5	4	1	5





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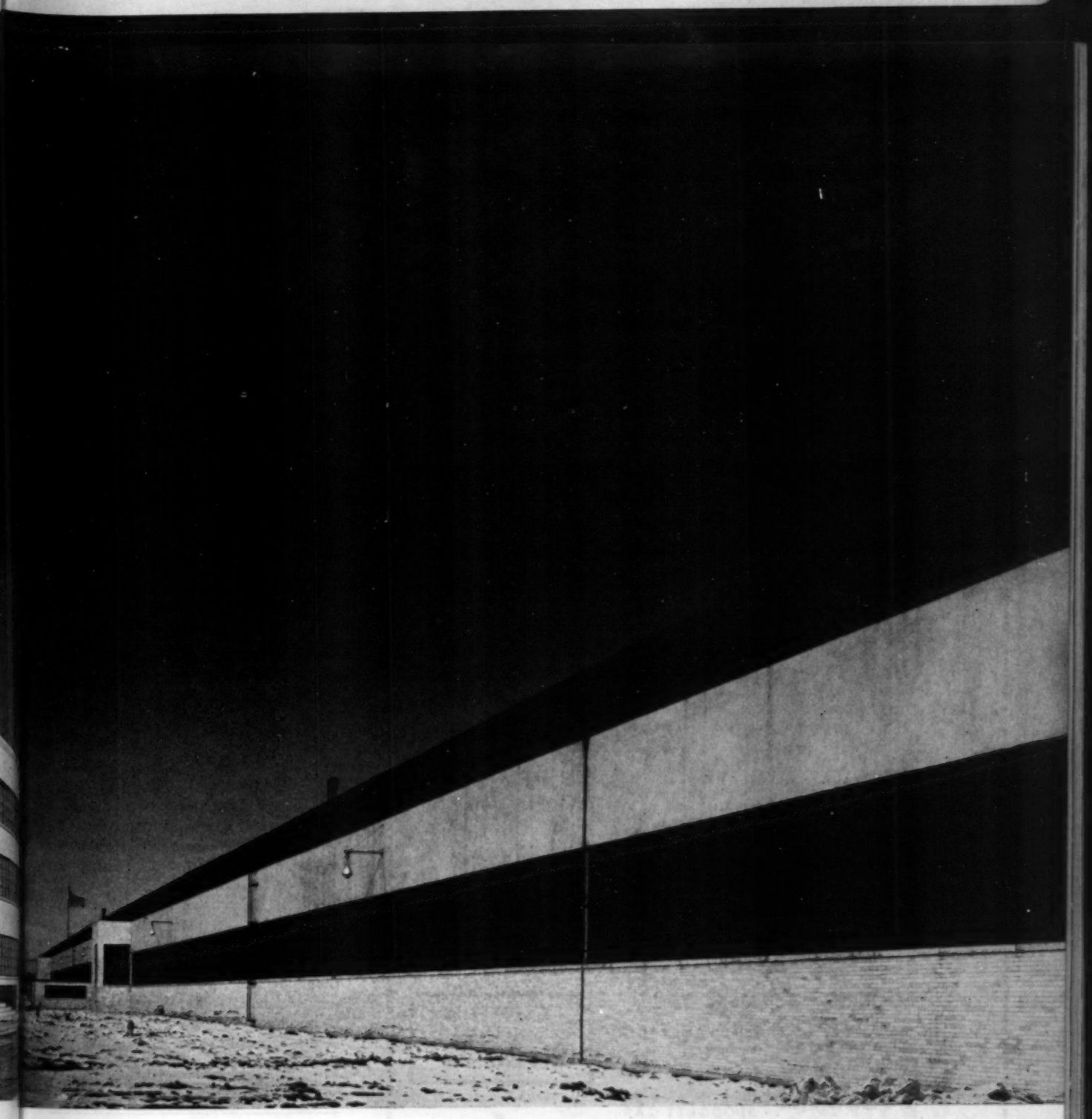

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REQUIRED READING

THE CITY IS THE PEOPLE

By Henry S. Churchill. New York 18 (8 W. 40th St.), Reynal & Hitchcock, Inc., 1945. 5½ by 8¼ in. 186 pp. illus. $3.00.

"Our cities," says Mr. Churchill, "any and all, are at best glorifications of the ungracious. The gridiron plan will permit of nothing else. . . . Separately beautiful buildings, unrelated spacially, do not make a beautiful city. . . ."

There, in a filbert-shell, you have the essence of an architect's argument for adequate master planning. A city needs more than occasional beautiful buildings and streets well planned to meet traffic requirements, Mr. Churchill declares. It needs variety and vistas to make it esthetically pleasing, for the esthetic of it, "the relation of spaces to each other and to the buildings that form the spaces, is admitted to be as important to health and welfare as sewers and plagrounds."

There is nothing esthetic, as Mr. Churchill points out, about endless rows of rectangular blocks, monotonous miles of streets leading straight and true to empty lots or garbage dumps or acres of drab little row houses arranged with geometrical precision along an endless street and varied only by abortive superficialities. Uniformity is monotonous, Mr. Churchill avers: no one feels impelled to follow a road stretching endlessly straight ahead, but who can resist the pull of a road that winds?

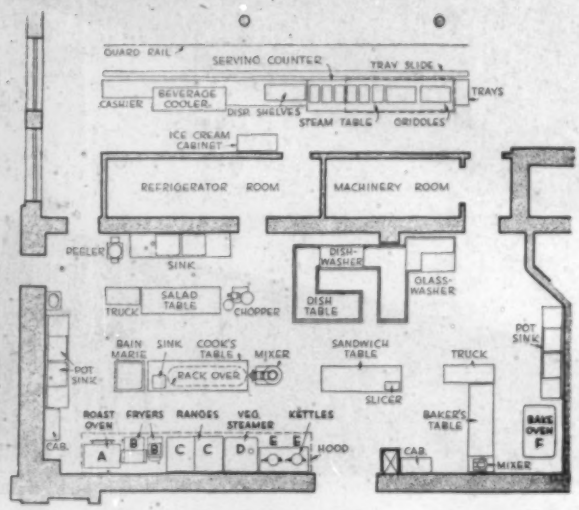
In large part it is this emphasis on the need for esthetic appeal, for change of pace, that makes Mr. Churchill's book a vital discussion of city planning. But there is more to it than this, important though it is. There is, for example, a fine history of city planning from 3000 B.C. to the present; there is a sound comparison of city growth here with that in Europe; and there is an equally sound and telling analysis of master planning by planners of old —Haussman, L'Enfant, *et al*— and what happened to their plans. There is an excellent chapter on the problems facing us in urban redevelopment, another on what has been done to date. And finally there is an analysis of current trends.

Planning is needed, Mr. Churchill concludes, because it is uneconomic and wasteful land use patterns rather than bad achitecture and shoddy construction that is primarily to blame for city blight. But the real need, in his opinion, is a new synthesis of design, "a device by which the technical essentials of the city plan can be subordinated to the greater elements of design. . . . Zoning, master plans, surveys—these are instruments, not ends. The end is a livable city, suited to modern technologies of living. . . . A city plan is the expression of the collective purpose of the people who live in it, or it is nothing."

KITCHEN PLAN NO. 26:

Twenty-sixth of a series of successful mass-feeding kitchen plans.

The serving of several thousand hot school lunches daily moves easily through this smartly designed kitchen at the Englewood High School in Chicago.



COOKING EQUIPMENT USED:

(a) 1 No. 952 BLODGETT GAS-FIRED ROASTING OVEN

(b) 2 deep fat fryers

(c) 2 heavy-duty ranges

(d) 1 vegetable steamer

(e) 2 trunnion kettles

(f) 1 No. 982 BLODGETT GAS-FIRED BAKING OVEN

KEEP FOR HANDY REFERENCE!

Designed by: Board of Education, Chicago; John C. Christensen, Architect, under the direction of F. O. Washam, Director of Lunch Rooms. Installed by Alex Janows & Company.

A broad-gauge and highly varied menu provides many types of roasts and baked foods which are easily handled in the BLODGETT ROASTING OVEN used in this plan. The No. 982 BLODGETT BAKING OVEN handles rolls, pies and pastry. For details and specifications of BLODGETT OVENS, consult your equipment house or write

THE G. S. BLODGETT CO. Inc.

53 Maple Street **Burlington, Vermont**

Reprints of this new series will soon be available to architects on request.

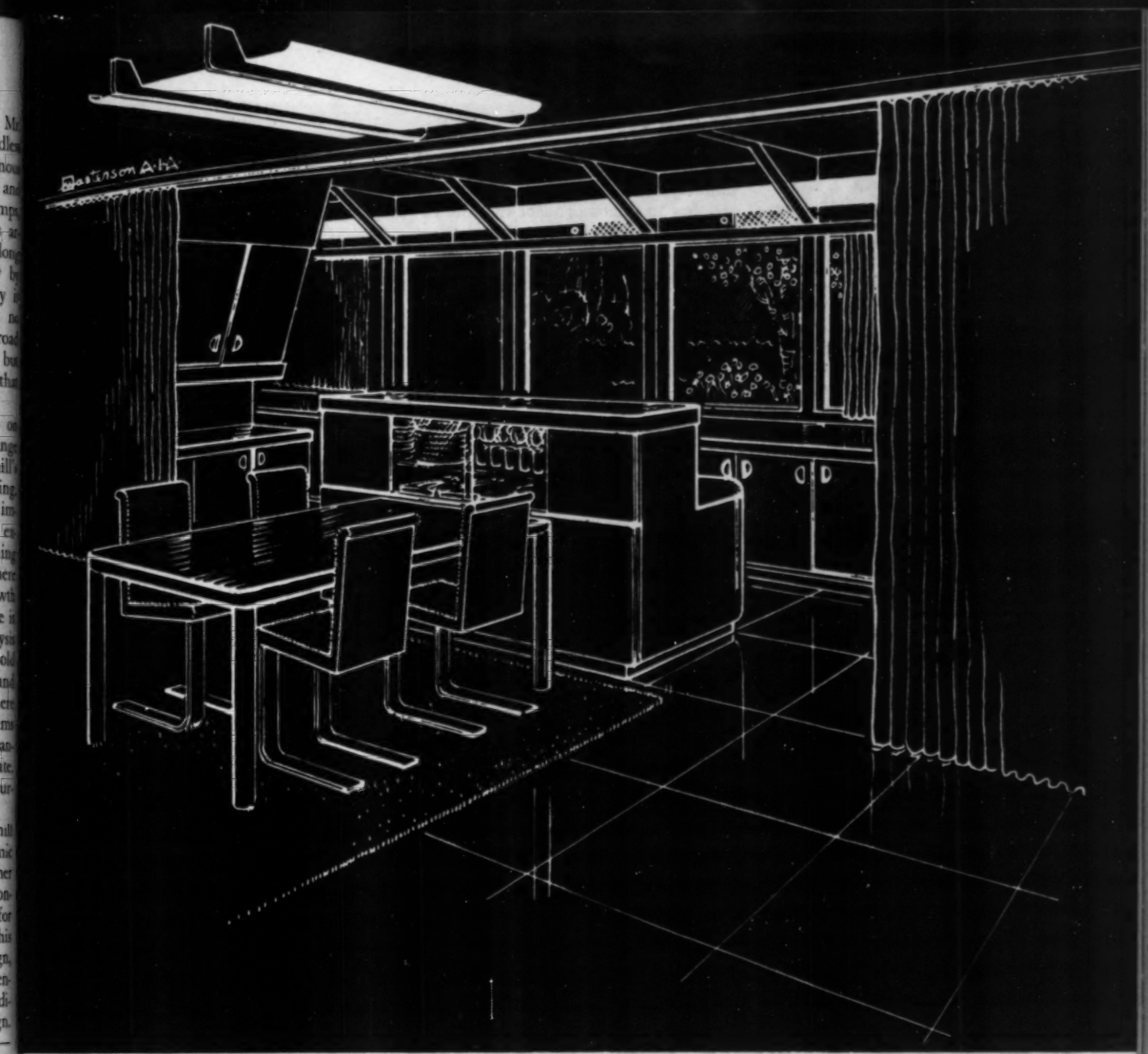
POSTWAR PLANNING

BRITISH ISLES

Maps for the National Plan: A Background to the Barlow Report, the Scott Report and the Beveridge Report. Prepared by the Assn. For Planning and Regional Reconstruction. London W.C. 1, Eng. (12 Bedford Sq.), Lund Humphries & Co., Ltd., 1945. 8¼ by 13 in. 15s.

As the foreword explains, "the maps presented here have been devised as a background for discussion and criticism of plans for postwar reconstruction." The maps chart such subjects as fog and sunshine, chief urban areas, density of and changes in population, analysis of employment, overcrowding, cost of living. Pertinent passages from the three reports are quoted opposite each.

(Continued on page 136)



Plastics . . . in Homes

After Victory, G-E Plastics Divisions will produce again for better living. The following list suggests the possible applications of G-E plastics in homes.

WALL SURFACING AND DOOR MATERIALS • COUNTER TOPS • PARTITIONS • FURNITURE MATERIAL • HARDWARE • LIGHTING FIXTURES • ELECTRICAL SUPPLIES AND PANEL BOARDS • BATHROOM FIXTURES AND SPECIAL PARTS

The General Electric Company offers architects, designers and engineers the service of its plastics technicians. These experienced men can give you technical advice and information on the use of all plastics materials—laminates, compression, injection and extrusion molded, low pressure and cold molded. The General Electric Company molds and fabricates all compounds that are on the market today and because of this is not limited to one particular material or manufacturing process. For further information write Section E-20, One Plastics Avenue, Pittsfield, Mass.

Hear the General Electric radio programs: "The G-E All-Girl Orchestra" Sunday 10 P.M. EWT, NBC. "The World Today" news every weekday 6:45 P.M. EWT, CBS. "G-E House Party" every weekday 4:00 P.M. EWT, CBS.

GENERAL ELECTRIC

PD-20

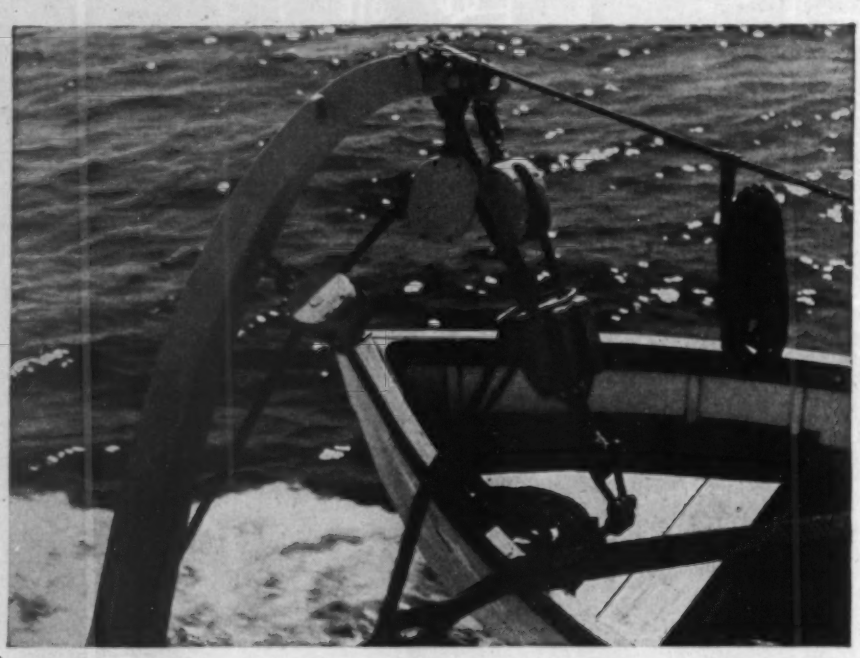
INSURE YOUR FUTURE BY BUYING WAR BONDS

REQUIRED READING (Continued from page 134)

ST. PAUL, MINN.

Recommendations for the Development of the Downtown Area in St. Paul. New York 19 (580 Fifth Avenue), Raymond Loewy Associates, 1945. mim. 8 by 10 in. 42 pp. illus.

This report to the Central Business Development Committee of St. Paul contains recommendations for postwar improvement of the central shopping districts and approaches to the city. These recommendations are first of all practical; they are not of the day-dream unlikely-to-be-accomplished variety, nor are they so interdependent that the entire program must be undertaken at one time. Included are such items as the re-facing of stores and amusement centers, removal of large signs jutting out over the sidewalk, provision of adequate parking and garage space, building of a new, modern bus terminal and a new commercial hotel "of exciting design." Also included are recommendations for the simplification of traffic in re-routing of street cars, widening of streets, provision of under- and over-passes.



TRUSTWORTHY

Of all the material things on which man relies in time of crisis, none is worthier of his trust than are Von Duprin fire and panic exit devices.

For nearly forty years Von Duprins have kept the faith. No matter what the emergency, they have always provided safe, sure, instant exit. They have saved countless thousands of men, women, and children from the twin terrors of fire and panic.

Whether they are the current models, of sturdy malleable iron, or the more brilliant brass and bronze types of pre-war days, Von Duprins . . . solely on the basis of their past performance . . . merit your full confidence and trust.

Every Von Duprin is built to do just that!

Von Duprin
TRADE MARK REG.
DIVISION
VONNEGUT HARDWARE CO., INDIANAPOLIS, IND.

CHICAGO, ILL.

Chicago Looks Ahead. Chicago, Ill. (20 N. Wacker Dr.), Chicago Plan Commission, 1945. 8½ by 11 in. 78 pp. illus.

Here is the Chicago Plan Commission's proposed 947 million dollar public works program embracing schools, hospitals, expressways, libraries, etc. The program is proposed as a guide for public improvements through the first ten years after the war. The largest items are the modernization and development of the rapid transit system, estimated to cost over $175 million, and the construction of a comprehensive expressway network at an estimated cost of over $167 million.

Although housing as such does not enter into this public-works report, the Commission discusses briefly its overall housing program which calls for the construction of about 1,200,000 new dwelling units and the razing of at least 108,000 substandard units.

CLEVELAND, OHIO

Places for Playing in Cleveland, Cleveland, Ohio, City Planning Commission, 1945, 6 by 8 in. 32 pp. illus.

With a minimum of text and a maximum of illustration, this booklet presents the play space requirements of a modern city: playlots for children of from one to five; playgrounds for those from five to 15; playfields for children over 15 and adults; and neighborhood parks for all ages. Layout, size, equipment needs and preferred location of each type are described, and a neighborhood map is included to show their relationship.

HOUSING

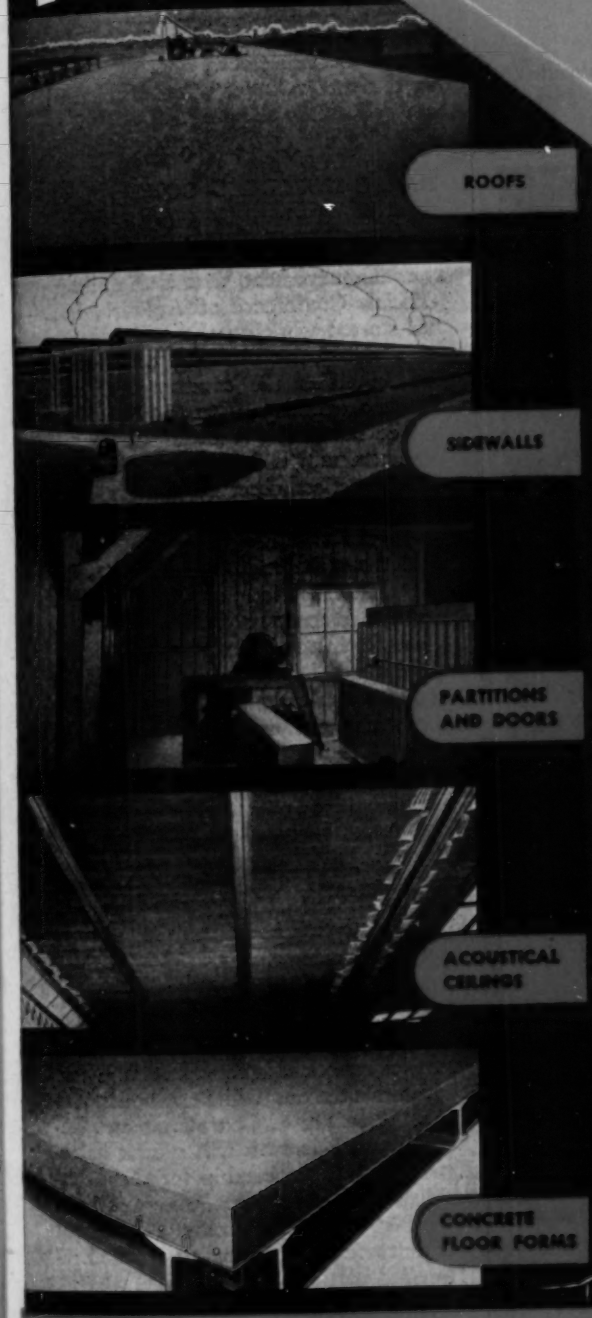
MULTIPLE DWELLING LAW: A CLARIFICATION

New York 10 (105 E. 22nd St.), Committee on Housing, Community Service Society, 1945. 6¼ by 9½ in. 384 pp. $5.00.

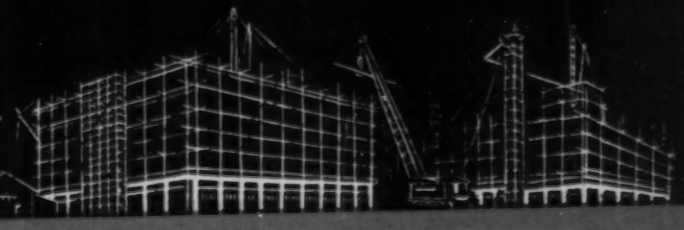
New York's Multiple Dwelling Law has become so cumbersome with revisions and amendments through the years since its adoption in 1929 that a legislative committee for its recodification was appointed last year. This "clarification" by the Committee on Housing of the Community Service Society is a very useful preliminary to what the legislative committee may recommend. For it concerns itself with a paragraph by paragraph simplification of language and form. Transfer of items from one section to another, elimination of unnecessary or impertinent words or sentences, omission of obsolete

(Continued on page 150)

MAHON *Steel* DECK



HAS ALL OF THESE USES IN THE CONSTRUCTION OF MODERN COMMERCIAL AND INDUSTRIAL BUILDINGS



THE R. C. MAHON COMPANY
DETROIT 11 — CHICAGO 4

Manufacturers of Rolling Steel Doors, Steel Roof Deck, Shutters and Grilles, Kalamein Doors, Tin Clad Doors, Cast Iron Roof Sumps and Roof Sump Recesses.

THE RECORD REPORTS (Continued from page 14)

Housing Survey

Government housing men were among those assembling in a Washington hotel to hear the results of a housing survey conducted by the Curtis Publishing Company in 118 cities of 35 states. Consumer plans and preferences were brought out by the survey, which indicated that most families prefer Colonial and Early American style architecture with a little over the 10 per cent inclined toward the so-called modern style. Most prefer newer areas of suburban sections for home locations at a median price of about $6,000. They want single-family detached houses, prefer six rooms and would accept one bathroom. Only 10 per cent desire homes costing over $10,000.

New Developments

Two new developments of interest are reported by the War Production Board's Office of Research and Development. One is a successful solar heat trap (worked out at the University of Colorado) which captures more than 30 per cent of the sun's heat and delivers it to heat storage or to the house-heating system of the home. It is automatic in operation.

The other has to do with prefabricated demountable sheds and warehouses for use in war theaters and elsewhere. Pilot construction has been tested by the War Department. Weight of the building per square foot of shed area is extremely low, says WPB, and its compact volume, when dismantled, makes for easy shipping.

✦ ✦ ✦

BASIC BUILDING CODE

Good news in the light of the very real need for building code revision is the announcement that the Building Officials Conference of America, Inc., has started work on the promulgation of a new basic building code which municipalities the country over may use as a working guide.

The new code, according to the announcement, "will incorporate the best code practices observed in this country." Furthermore, as new materials and techniques are proved to be practical from the standpoint of function, appearance, performance, maintenance and public acceptance, they will be provided for in the basic code.

First step in the promulgation of the code was taken last November when the officers and executive committee of the Building Officials Conference adopted a resolution directing the president of the Conference to appoint a committee for the purpose. President Walker S. Lee, superintendent of buildings of Rochester, N. Y., accordingly appointed a Basic Building Code Committee under the general chairmanship of Albert H. Baum, building commissioner of St. Louis, Mo. Subcommittees have been at work for the past four months preparing recommendations on subject matter assigned to them. These recommendations will be submitted to the Committee of Consultants and Review, which in turn will submit its report to the membership for their consideration and action. After approval, the National Basic Building Code will be released to municipalities and all interested parties without charge.

Two supplements to the code are proposed: (1) the Construction Supplement, to provide for methods and materials of construction; and (2) the Construction Details Supplement, designed primarily to assist understaffed municipalities in the determination of the adequacy of design and the sufficiency of material.

The Conference invites suggestions

(Continued on page 140)

The Barcol OVERdoor for Residence Garages

With the withdrawal of limitation orders, the manufacture of Barcol OVERdoors for general residence use is again possible, subject only to priority orders and the availability of materials and manpower. Frankly, we have on hand a considerable volume of priority business and material of satisfactory quality is hard to find, so it will not be practical for us to start immediate delivery of Barcol OVERdoors in quantity on unrated orders. We are, naturally, doing everything we can think of to overcome these handicaps and have hopes of an early solution. In the meantime, we welcome your inquiries and will be glad to *accept your orders* if you are willing to place them on a when-possible basis. There are a lot of residence garages, present or planned, that can use Barcol OVERdoors to good advantage, and we want to see that they get them as soon as possible. *For detailed information, see your Barcol representative.*

BARCOL

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY

102 MILL ST. • ROCKFORD, ILL.

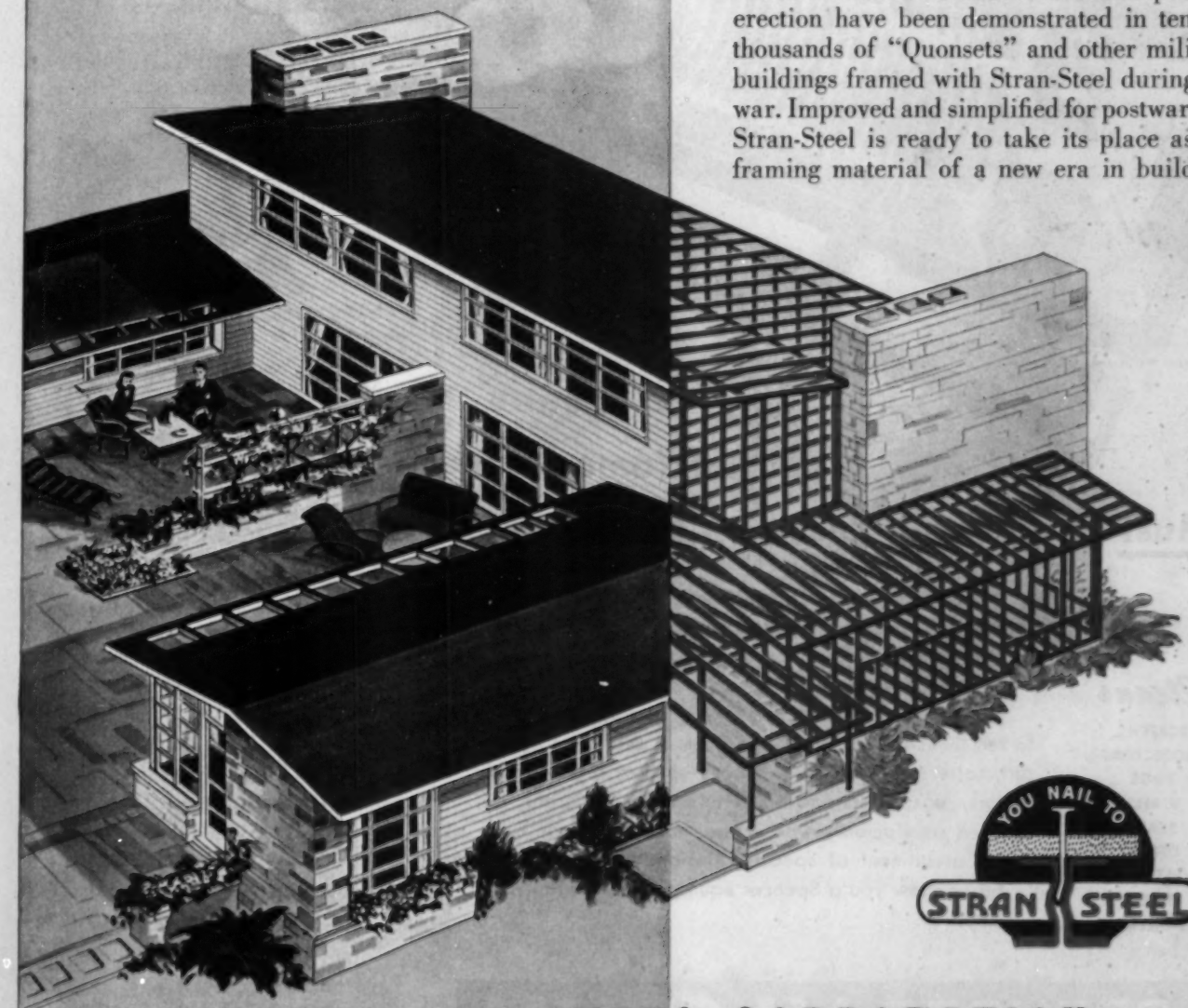
THINK IN TERMS OF

STRAN STEEL

Look beneath the surface for the mark of the progressive builder

That framework of Stran-Steel, with its nailable studs and joists, sets any house apart from others of comparable design. For it imparts an inner value . . . permanence, fire-safety, freedom from warp, sag and rot . . . that safeguards the housing investment and enhances the builder's reputation.

Progressive architects and contractors are thinking in terms of Stran-Steel . . . shaping their building plans around this uniform precision material. Its ease of use and speed of erection have been demonstrated in tens of thousands of "Quonsets" and other military buildings framed with Stran-Steel during the war. Improved and simplified for postwar use, Stran-Steel is ready to take its place as the framing material of a new era in building.



YOU NAIL TO STRAN STEEL

GREAT LAKES STEEL CORPORATION

Manufacturer of the Famous Quonset Hut for the U. S. Navy

STRAN-STEEL DIVISION • 37th FLOOR PENOBSCOT BUILDING • DETROIT 26, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

THE RECORD REPORTS *(Continued from page 138)*

and inquiries so that the code, when completed, will represent the best composite thinking on the requirements covering building regulations. Address Walker S. Lee, President, Building Officials Conference of America, City Hall, Rochester, N. Y.

POSTWAR CONSTRUCTION

The spotting of 99,638 specific construction projects contemplated for postwar execution in the 37 states east of the Rocky Mountains had been reported by the field staff of F. W. Dodge Corp. by the end of May. The combined value of all projects is $15,746,202,000. Only specific projects are included in the listings; announcements of general construction or expansion programs are not included.

The information was obtained in continuous surveys for more than a million individuals, companies, institutions and government agencies, and represents the cumulative and unduplicated reports of the Dodge field staff over a three-year period. While 99,638 projects are listed, the actual number of buildings involved is much greater.

Analysis of the individual project reports shows that 33,104 jobs, estimated to cost $7,753,138,000, have progressed to the design stage. The remaining projects with an estimated cost of $7,993,064,000, constitute a backlog of specific contemplated projects, many of which will progress to design stage as rapidly as architects and engineers can find enough draftsmen to expand their currently limited planning activity.

Privately owned projects in the design stage number 22,795, with an estimated total value of $2,609,675,000. This is considerably greater than the volume of private construction contracts awarded in 1938, 1939 or 1940.

SPERRY AWARDS

Winners of the collaborative competition for the design of a memorial to Dr. Elmer S. Sperry have been announced by the Sperry Gyroscope Company and the Alumni Association of the American Academy in Rome as follows:

First, Sperry prize of $1,000 plus the students' prize of $200, to the team of Mary T. Wilcox, architect, University of Pennsylvania, Helen Omansky Gross, painter, and Richard Frazier, sculptor, both of the Pennsylvania Academy of the Fine Arts;

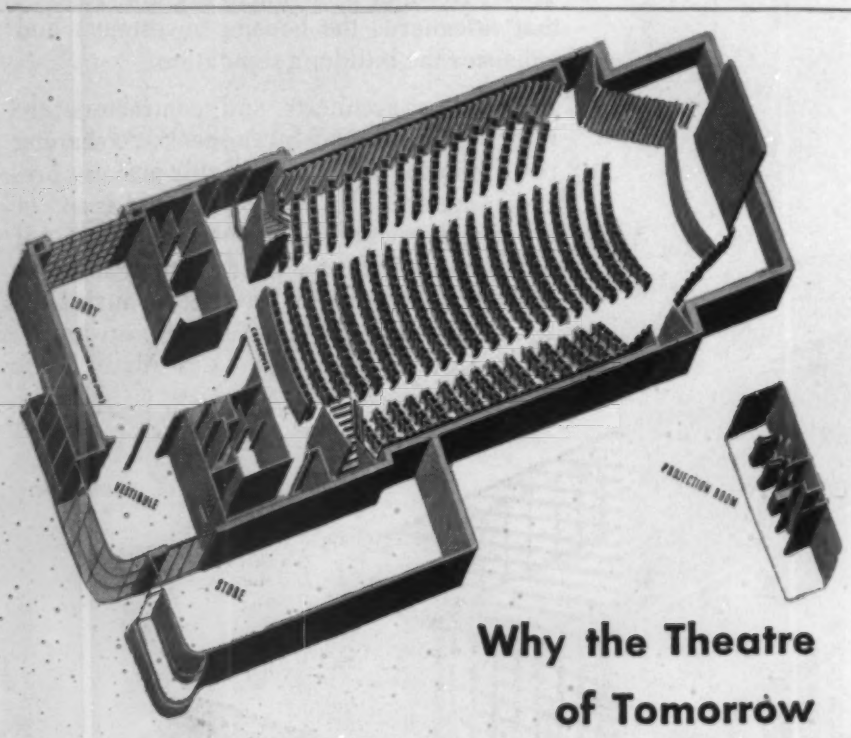
Second, Sperry prize of $200 plus the students' prize of $75, to the team of John Pile, architect, University of Pennsylvania, Eda Castle, sculptor, and Marie-Celeste Fadden, painter, both of the Pennsylvania Academy of the Fine Arts.

Three Sperry prizes of $100 each were awarded to the following teams: Eduardo Mejia, architect, University of Pennsylvania, Bolton Morris, painter, and Andrew Hawkins, sculptor, both of the Pennsylvania Academy of the Fine Arts; William Henry Deacy, architect, Vincent Carano, sculptor, and Ernest S. Leland, painter, all of New York City; Mayer and Whittlesey, Sgt. Edgar A. Tafel (associated), architects, and Amedie Ozenfant, painter, of New York City.

INDUSTRIAL DESIGNERS FORM GROUP

Fifteen leading industrial designers have formed the Society of Industrial Designers, whose purpose is to establish criteria for ethics, training and practice in the profession. Officers are: president, Walter Dorwin Teague; chairman of the executive committee, Raymond Loewy; vice president, Henry

(Continued on page 142)



Why the Theatre of Tomorrow Must Be Spencer Vacuum Cleaned . . .

It Cleans
SCREENS
PROJECTORS
RUGS
WALLS
SEATS
OFFICE
VESTIBULE
FILTERS
BOILERS

Is it reasonable to design a beautiful theatre like that shown above, with fine decorations and expensive equipment, and leave it to the ravages of tramped-in dirt and dust for years to come?

The power of Spencer Central Vacuum Systems is five to ten times that of small portables. It gets more of the dirt, faster and from more places such as organs, projectors, rugs, filters and boiler tubes which can only be cleaned satisfactorily with central vacuum and an adequate assortment of specially designed vacuum tools.

Let us show you a Spencer equipped building in your vicinity.

SPENCER HARTFORD VACUUM CLEANING
THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.

256A

LOW-COST HEAT *for low-cost Homes*

FITZGIBBONS WARM AIR FURNACE 80 FWA

The right unit for low-cost housing. For hand-fired coal, but with thermostat-controlled blower forcing circulation of warmed air. Features Fitzgibbons "Weldseal" construction which positively insures against leakage of flue gases into the air stream. Easily and quickly installed, moderate in price, emphatically low in fuel cost.

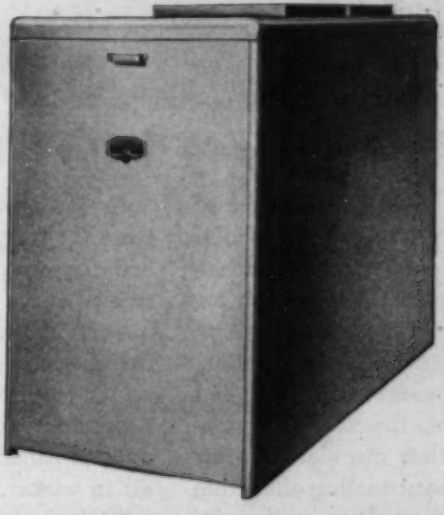
The home-building program is long overdue. The release of materials is imminent. The blueprint stage is here and in many cases, past. Great developments of low cost housing are projected — and of moderate cost individual homes as well.

Fitzgibbons knows what the potential owners of these homes want in warm air and conditioned air comfort. Here it is—in hand-fired "semi-automatic" warm air for the low-cost home, in automatic conditioned air for the moderate priced residence. Both with remarkable standards in fuel economy.

Fitzgibbons Boiler Company, Inc.
101 Park Avenue, New York 17, N. Y.
Works: OSWEGO, N. Y. • *Branches in Principal Cities*
Member Indoor Climate Institute *Member Steel Boiler Institute*

FITZGIBBONS *DIRECTAIRE* CONDITIONER

Designed for the moderate-priced home in which is demanded all the comfort of warmed, humidified, filtered and circulated air, in a unit that has beauty in appearance and finish, quietness in operation, and typically Fitzgibbons fuel saving. Welded steel construction, easy cleaning, operates with an oil burner, or gas burner.



BUY *and* HOLD
U. S. WAR BONDS
***and* STAMPS**

60TH YEAR

YOU CAN'T GO WRONG WITH A *FITZGIBBONS*

 (Continued from page 140)

Dreyfuss; treasurer, Harold Van Doren; secretary, Egmont Arens. Serving as the board of directors are the other founders of the Society: Donald Deskey, Norman Bel Geddes, Lurelle V. A. Guild, Ray Patten, Joseph B. Platt, John Gordon Rideout, George Sakier, Jo Sinel, Brooks Stevens and Russel Wright.

Philip McConnell, recently with the U. S. Treasury Department, has been appointed executive secretary, and temporary offices have been established at 55 W. 42nd St., New York 18, N. Y.

USO APPOINTMENT

Robert S. Hutchins, a member of the New York firm of Moore & Hutchins, has been appointed Director of Building Services for the United Service Organizations, Inc. He has been identified with the USO building and furnishings program as associate director since 1942.

WING *Revolving* UNIT HEATERS

Many who have been aware of the superiority of Wing Revolving Unit Heaters for wintertime heating are just discovering for themselves the added value of these heaters in summer, when, with the steam turned off and the fans on, the revolving discharge outlets circulate the air with a pleasant cooling effect that reaches all workers uniformly.

As the moving streams of air sweep slowly around through 360 degrees, they cover successively every direction, mixing the air uniformly and creating a delightful cooling effect that is equally effective in stimulating production in hot weather as is accomplished with the heated air in winter.

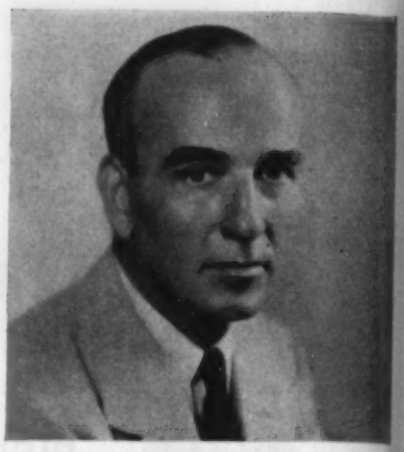
Write for a copy of Bulletin HR-4.

Wing

L. J. Wing Mfg. Co.

151 W. 14th St. New York 11, N. Y.

Factories in Newark, N. J. and Montreal, Canada



Perry Coke Smith, of New York A.I.A.

PERRY SMITH HEADS NEW YORK A.I.A.

Perry Coke Smith, of the firm of Voorhees, Walker, Foley & Smith, was elected president of the New York Chapter of the A.I.A. at the chapter's recent annual luncheon meeting. He succeeds Arthur C. Holden for the one-year term expiring June, 1946.

Other officers elected are: vice president, Morris B. Sanders; secretary, Theodore J. Young, of Egger & Higgins; treasurer, Robert W. McLaughlin, Jr., of Holden, McLaughlin & Associates.

FERGUSON LEAVES FHA

Abner H. Ferguson for the past five years Commissioner of the Federal Housing Administration, resigned his post in mid-June to resume the practice of law. He is now associated with the firm of Watters, Cowen and Baldridge of New York as their counsel in Washington.

On July 1 Mr. Ferguson also assumed the responsibilities of Washington counsel for and mortgage consultant to the United States Savings and Loan League.

OFFICE NOTES

Offices Reopened

Raymond Viner Hall, R.A., has reopened his office for the practice of architecture at Lynn Hall, Port Alleghany, Pa. Mr. Hall is a consultant in radiant heating.

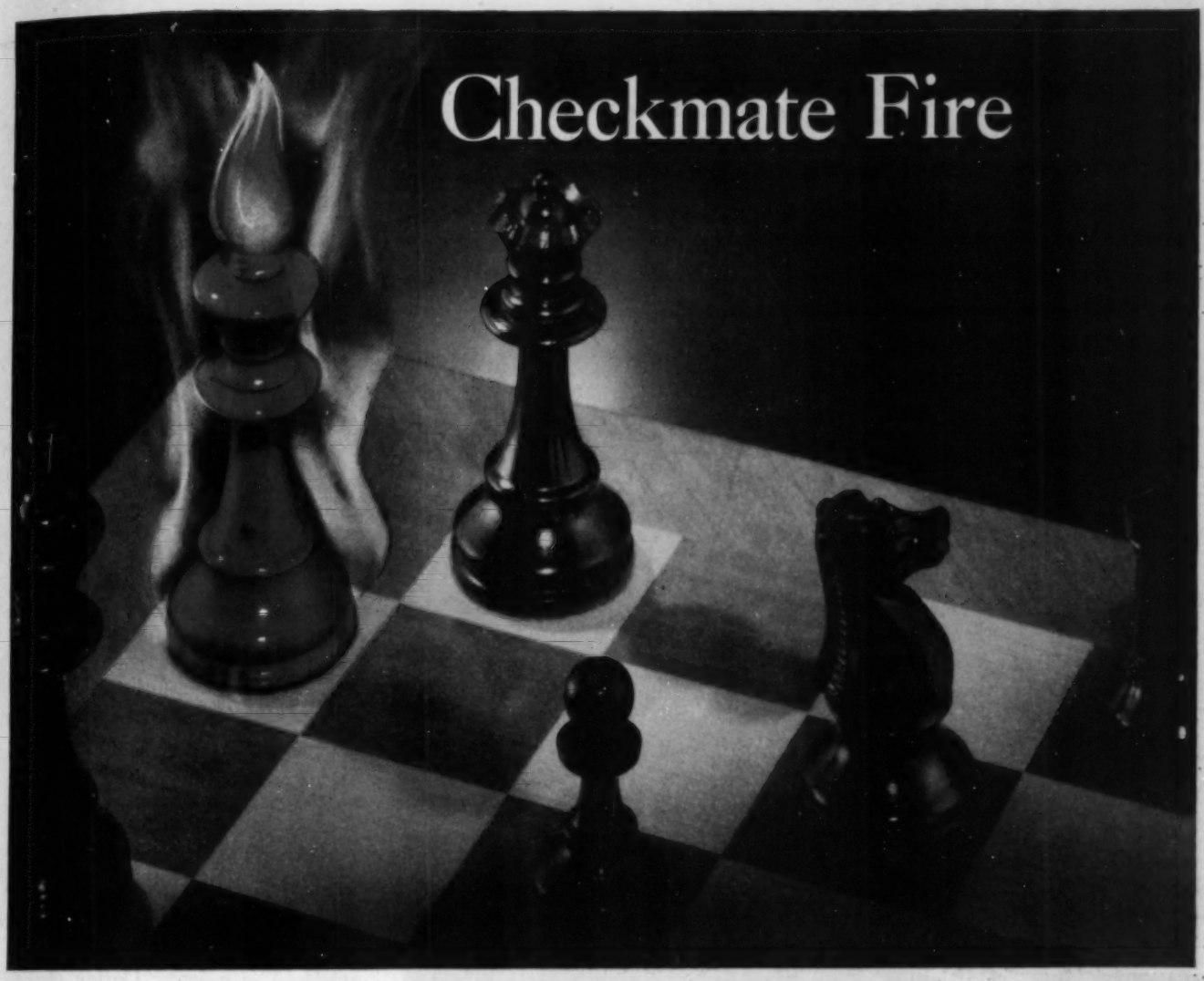
Theodore L. Perrier, architect, has reopened his office at 418 Carondelet Bldg., New Orleans, La., following his release from the service.

New Offices

The following architects have announced the opening of new offices:

S. Brian Baylinson, at 26 W. 58th St., New York 19, N. Y.

(Continued on page 144)



SHEETROCK *Fireproof* WALL *and* CEILING PANELS

Stakes are high in any match with fire. 10,000 lives . . . $300,000,000 worth of property . . . untold suffering . . . these are fire's approximate annual winnings in recent years. That's why architects and builders must use even safer building materials to checkmate fire!

One safer building material is Sheetrock*. For these big panels are made of gypsum which will not burn. In fire after fire, they have kept the flame in check till help could arrive.

Best of all, fireproof Sheetrock makes walls and ceilings of enduring beauty. Ask for any form of decoration, for sweeping curves, for smooth surfaces, for decorative paneled effects . . . and Sheetrock can do the job.

Call for wood-grained effects . . . and Sheetrock offers faithful reproductions of knotty pine, bleached mahogany and walnut. That's why Sheetrock has done more wallboard jobs than any other gypsum wallboard in the world.

* Reg. T. M.

United States Gypsum

For Building • For Industry

Gypsum • Lime • Steel • Insulation • Roofing • Paint

THE RECORD REPORTS *(Continued from page 142)*

Matt L. Kujala, at Harbor Post Office Bldg., Ashtabula, Ohio.

Henry S. Kelly, at 282 York St., New Haven 11, Conn.

George A. Letts, A.I.A., in the Heights-Rockefeller Bldg., Mayfield Rd. and Lee Blvd., Cleveland Heights 18, Ohio.

Firm Continues

Wilbur Watson Associates, consulting, designing and architectural engineers, have announced the continuation of the business founded by their former associates, the late Wilbur J. Watson, Ralph L. Harding and Carl A. Nau. Present members of the firm are T. E. Terry, A. G. Hall, L. H. Pogalies, and M. Backlond. Address: 4614 Prospect Ave., Cleveland 3, Ohio.

Branch Office Opened

The firm of Hugh A. Kelly and B. Sumner Gruzen, architects-engineers, of Jersey City, N. J., have opened a branch office at 220 Broadway, New York City.

Change of Address

Robert Heller, industrial designer, has moved his offices to permanent quarters at 2 W. 46th St., New York 19.

Since July 1, Mr. Heller's organization has been known as Robert Heller Associates, and includes Russell Krob, former instructor of design at Bennington College, and Jack Coble, formerly with Raymond Loewy Associates.

EXHIBITION POSTPONED

Because of the difficulties encountered by both designers and manufacturers in getting material released for fall showing, the exhibition "Tomorrow's Homes," scheduled to open at the Newark, N. J., Museum on Nov. 30th has been postponed until the spring of 1946. Emphasis of the exhibition is to be on prefabrication and plastics.

J. ANDRE FOUILHOUX

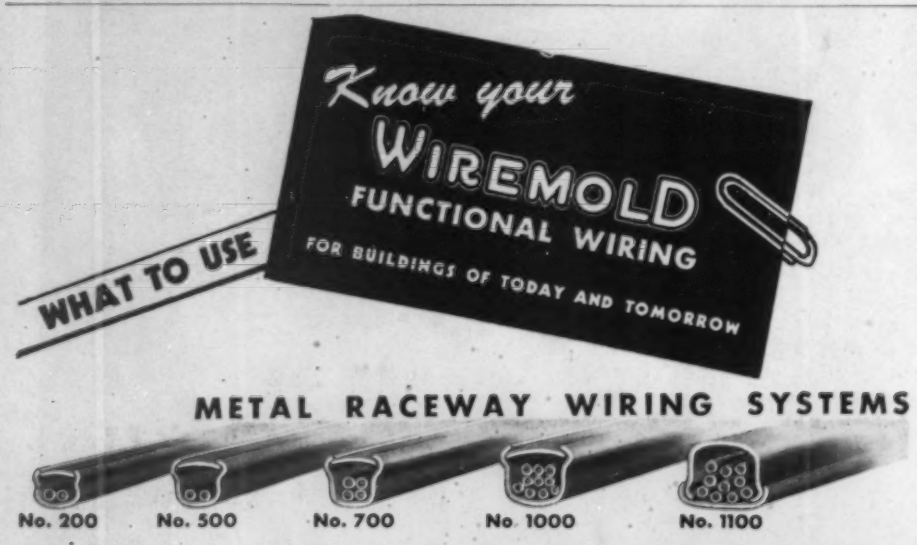
J. André Fouilhoux, well known New York architect and designer of the trylon and perisphere at the New York World's Fair, was killed on June 20 in a fall from the roof of a building he was inspecting. He was 65.

Born in Paris, Mr. Fouilhoux came to this country in 1903 and was naturalized 10 years later. During the last war he served in the U. S. Army as an artillery officer.

Mr. Fouilhoux was one of the designers of Rockefeller Center, New York City, and architect for a number of well-known buildings including the green McGraw-Hill skyscraper on West 42nd Street, New York, the Chicago Tribune Building in Chicago, and the American Naval submarine and air bases at Coco Solo and Balboa in the Canal Zone. He and his associates were also the designers of Fort Greene

(Continued on page 146)

The late J. André Fouilhoux, F.A.I.A.


WHAT TO USE
Know your
WIREMOLD
FUNCTIONAL WIRING
FOR BUILDINGS OF TODAY AND TOMORROW
METAL RACEWAY WIRING SYSTEMS
No. 200
No. 500
No. 700
No. 1000
No. 1100
WHERE TO USE THEM:
Nos. 500 and 700 on ceiling
No. 2100 Plugmold
No. 1500 Pancake on floor
For light, power, alarm and signal system wiring in factories, hospitals, offices, warehouses, public buildings, stores, hotels, schools and farms. For re-wiring old buildings. For extension or relocation of existing wiring.
HOW TO USE THEM:
Wiremold is widely adaptable to all standard and special wiring needs. The drawing shows a typical use of raceways and fittings from panelboard to outlets. Wiremold Data Sheets for Architects show many other applications.
HOW TO GET MORE DETAILED INFORMATION
Write THE WIREMOLD COMPANY HARTFORD 10, CONN.
SEE OUR CATALOG IN SWEET'S
The Wiremold Wiring Guide, Bulletins and Engineering Data Sheets are designed to give the architect all the information he needs. We will be glad to send you these helps without obligation. Write us.

STRIKE AT INFANTILE PARALYSIS

TRACED TO "HANDYMAN" PLUMBING

CAUSE AND EFFECT
of back siphonage
The DOCTOR
The PATIENT
Objective is to obtain one thousand filled-in questionnaires this year

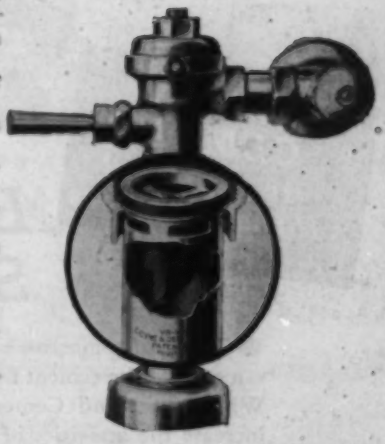
Above reprinted from DOMESTIC ENGINEERING whose campaign against POLIO is a recognized important public service.

STOP THIS MAJOR SOURCE OF WATERBORNE EPIDEMICS WITH DELANY No. 50 VACUUM BREAKER

Stop all back-syphonage into the water lines through the use of the No. 50! All submerged inlets, flush valves in particular, that have jets must be equipped with an approved vacuum breaker in a large number of the country's municipalities.

The universal adoption of the vacuum breaker will do more to stop the spread of waterborne germs and epidemics such as typhus, polio, etc., than any other method of protection.

If health protection is the only yardstick in determining the Vacuum Breakers you plan to specify, sell or install, then the Delany No. 50 is a MUST. It is self-policing—will function for years. Will prevent back-syphonage, even though the unit is mischievously or maliciously sabotaged. The No. 50 is unobtrusive—almost invisible. Fits any make flush valve, or other jet type unit such as washing machines, etc. FULLY APPROVED by U. S. Bureau of Standards, States and Municipalities.



Send for complete information, and interesting comments, reports and tests made by recognized sanitation authorities.

SINCE 1879

Coyne & Delany Co.

BROOKLYN N.Y.

 (Continued from page 144)

Houses in Brooklyn, a housing development, and of the Clinton Hill housing project which Mr. Fouilhoux was inspecting when he met his death.

Mr. Fouilhoux was a fellow of the American Institute of Architects, president of the New York Building Congress, treasurer of the Beaux Arts Institute of Design, and a member of the Architectural League and the American Society of Civil Engineers.

ARCHITECTURE— 17th CENTURY

In 1620 Inigo Jones, famous English architect, drafted plans for the first stone and lime fort on Manhattan Island for the Dutch East India Company. The fort was to form the nucleus of Nieu Amsterdam, now New York City.

In a letter addressed to the company, Jones wrote of his plans:

"To buld with timbers with a palizad about with boards may be expedient for the time, but to buld in stone and lime will be more lasting. The Dytch here intended will be cutt 20 foot wide 10 foot deepe, the Earth to be cast inwardes for a distance around of 60 foot on the sides as will be followed. The caste Earth to make a good Rampier strength being made with some flankers. The Grounde doth naturaly lye fitt for to protect against an Enemye of policie. The Bawne of 40 foot to be bulded in drest stone and robble back to 20 foot high and 6 foot thick att base to 4 foot at Parapat with open Embrazures as will be seen in the fare drawing.

"Good fresh lime can be carryed beyond the seas in tight casks and this to four measures of sand is a sufficient mix. The millitary artificer can so arrang the quarters within the Bawne as he may think best fitt, when timbers can be used. My carvings and ornaments in the stone and to the gate and the arche are made clear to scale and to the mason."

The original of this letter is in the library of Colin Johnston Robb, architect, of Loughgall, County Armach, Ireland.

URBAN REDEVELOPMENT LEGISLATION

If American cities are to do a sound job of rebuilding their slum areas they must have the kind of state enabling legislation which assures local government control, the Urban Land Institute recommended last month in announcing a set of 14 principles which it considers essential to all urban redevelopment legislation.

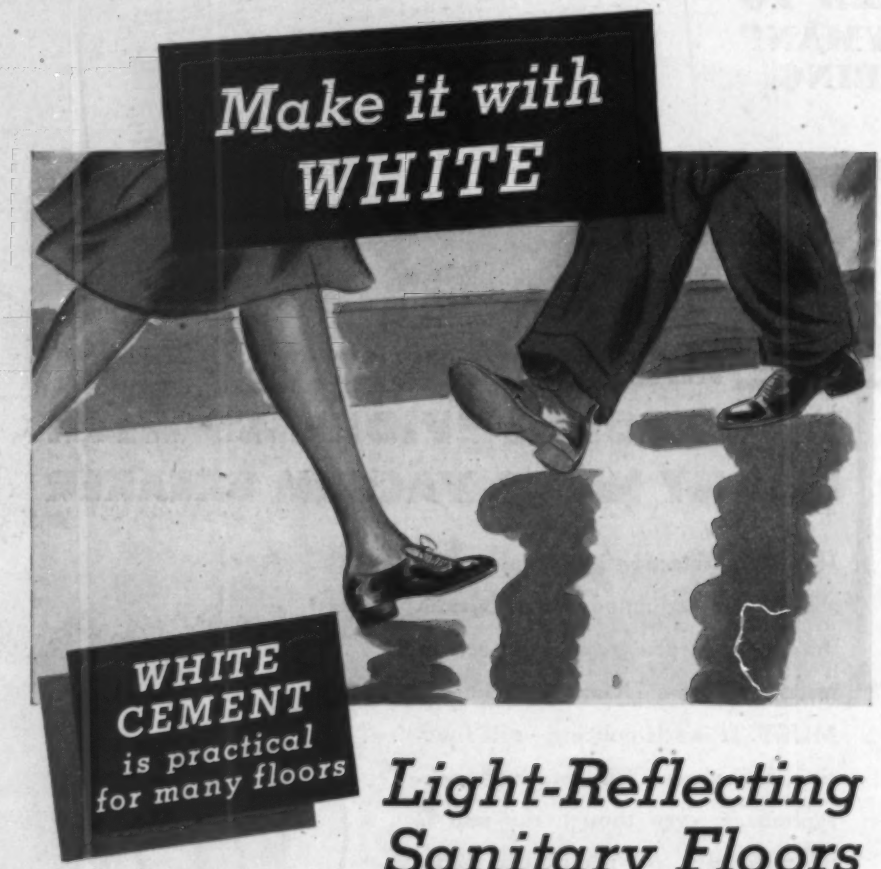
The 14 points advocated by the Institute are:

1. *Land Acquisition Agency.* For the assembly and disposal of property involved in urban redevelopment projects, the local government should be required to create an urban redevelopment agency comprised of three to five representative citizens. The agency would be an arm of the local government and responsible to it. It should be set up as a corporate body with wide powers to purchase, clear and dispose of land, but under the control of the local legislative body.

2. *Comprehensive General Plan.* Before any redevelopment project is undertaken, a comprehensive plan of the entire municipal area or preferably the metropolitan district shall be prepared, and the redevelopment project shall be in general accord with that comprehensive plan.

3. *Areas to be Redeveloped.* Areas to be redeveloped should be determined on the basis that they are detrimental to the public health, safety, morals, or welfare, whether because of improper

(Continued on page 148)



Light-Reflecting Sanitary Floors

● Many of tomorrow's buildings will have light-reflecting, sanitary, white cement floors made with Medusa—the original White Portland Cement. Such floors give more light to increase the activities of workers, save light equipment and electricity, and are bright, easy to clean, smooth and non-absorbent . . . and they will stay white, for Medusa White is built into them and is not just a surface coating. Too, white cement floors can be laid over old floors. Send today for complete information on Medusa White for white cement floors.

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MEDUSA the ORIGINAL WHITE portland cement

FLEXIBILITY *in Design* with fast-erected steel panels

New Fenestra Building Panels . . .

a practical system of fast construction of attractive buildings for many purposes

The new Fenestra Building Panels combine structural elements and finished surfaces, for floors, walls, roofs and partitions, ready to receive finishing treatments, and affording cells to house service facilities—wires, ducts, pipes, etc.

In the model shopping center illustrated above, an application of Fenestra Building Panels is suggested. Note how Type A Panels are cantilevered to provide a sheltered walk, the upper side affording a flat surface for receiving waterproofing, and the under side a smooth, attractive soffit with recessed lights.

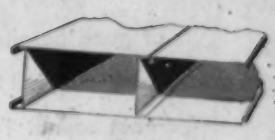
The walls are Type C Panels, filled with insulating material, and vapor-sealed. Provision can be made for the application of porcelain enamel and other decorative treatments.

Inside the building, Type A Panels are laid beam to beam, locked together for a tight-fitting floor, ready for hardwood, linoleum or carpet.

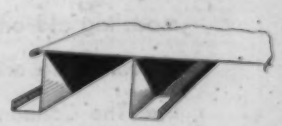
In stores, warehouses, factories, schools, hospitals, residences and many other types of buildings, Fenestra Building Panels are ideal for floors, walls, ceilings, roofs and partitions. Write for detailed information.

FOUR TYPES

TYPE A. Two channels with top and bottom plate which, with service cover, form two-cell box beam.



TYPE B. One flat surface, two channel-type ribs. Flat side up or down, inside or outside.



TYPE C. Horizontally or vertically, for walls. Normally filled with insulation at the factory.

HOLORIB. Steel Roof Deck with triangular-shaped ribs 6" on centers, 1½" deep, for spans to 8'.

Standard width of Type A, B and C Panels, 16", in #20 to #10 gages. Holorib in #20 and #18 gages.

Fenestra
BUILDING PANELS FOR ROOFS, WALLS, FLOORS

DETROIT STEEL PRODUCTS COMPANY,
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Please send me, without obligation, information on Fenestra Building Panels.

Name _____

Company _____

Address _____

 (Continued from page 146)

initial planning, because they are blighted or slum areas, or because of other reasons, and whether improved in whole or in part or wholly unimproved.

4. *Designation of Areas to be Redeveloped.* The designation of an area to be redeveloped should be made by vote of the local legislative body after due consideration of the recommendation of the planning commission or other proper local authorities.

5. *Finance of Land Assembly.* Local governments which otherwise conform to the requirements of the proposed legislation should be permitted to receive federal or state assistance or credit and they should also be permitted to make use of their own financial resources by the issuance of bonds or debentures for the purpose of urban redevelopment.

6. *Powers of Eminent Domain.* The right to acquire property for urban redevelopment through condemnation proceedings should reside in the community only and through it in the urban redevelopment agency and not in private redevelopment corporations or any other public agency.

7. *Disposal of Land.* The redevelopment agency should be permitted to sell or lease the land in the proposed redeveloped area in its entirety or any part thereof for the purpose of fulfilling the objectives of the redevelopment plan.

8. *Public Controls.* To insure that urban redevelopment shall operate in the public interest, reasonable public controls are necessary, and to that end the contract, deed, or lease agreement should contain covenants running with the land assuring the improvement and maintenance of such improvements in the manner determined by the redevelopment plan.

9. *Tax Abatement.* Tax exemptions, tax abatements, or tax freezing as a stimulus to redevelopment are dangerous expedients, which unless absolutely necessary, should not be adopted.

10. *Re-housing of Displaced Tenants.* The redevelopment agency should not be required to provide for the rehousing of displaced tenants. The redevelopment bill should not be a housing bill.

11. *Limitation of Profits or Dividends.* There should be no restrictions on the profits or dividends derived from private redevelopment projects.

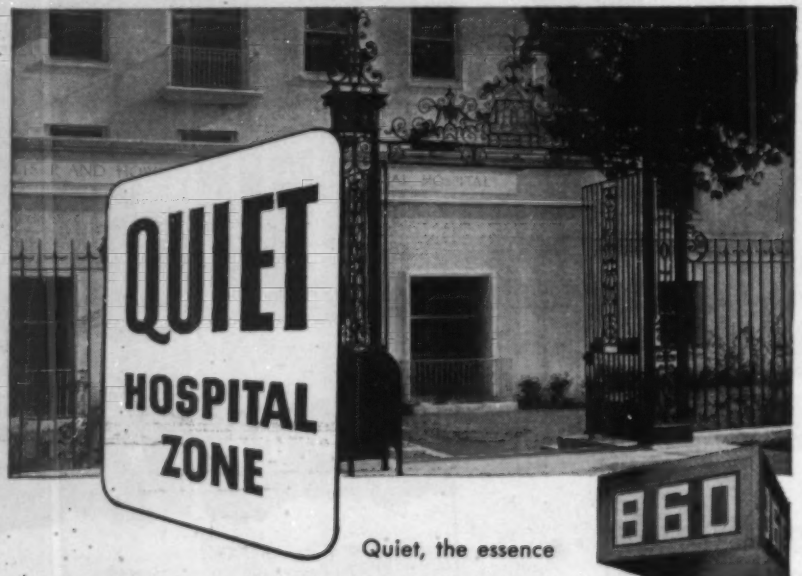
12. *Appraisal.* Appraisals by properly qualified appraisers should be made before purchase as well as new use appraisals made not more than one year before resale.

13. *Modification of Redevelopment Plan.* Careful safeguards should be provided against unwarranted modification and changes in the official redevelopment plan, but provision should be made for future proper modification.

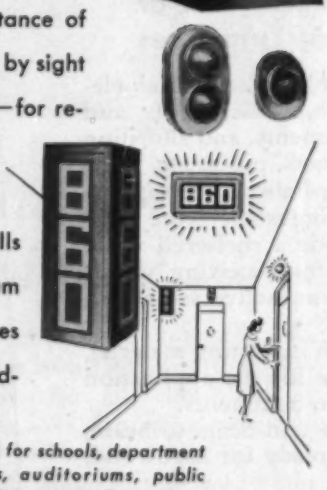
14. *Administrative Costs.* Funds should be provided to cover administrative costs of the redevelopment agency —preferably through action of the local legislative body.

CORRECTION—PAINT

On pages 70 and 136 in the October, 1944 issue of ARCHITECTURAL RECORD there were statements regarding the use of oil paint over casein paint that were inaccurate. The experts' testimony is that oil paint can be (and has been) used successfully over casein paint providing the casein paint is not chalky and is well bonded with the surface painted. Further research is being undertaken to determine the effects of using different kinds of paint over one another.



Quiet, the essence of good hospital service, is the substance of Cannon Signal Systems. They summon by sight —not sound. For all new hospitals—for remodeling old ones—specify the call system made originally for hospital use. The Cannon Paging System* calls four doctors at a time—gets maximum attention with no distraction. The Nurses Call System is fool proof and dependable. Both systems may be installed in old wiring or with surface mounted wiring.



*Ideal for schools, department stores, auditoriums, public buildings—any place where "silence is golden."

Cannon Signal Systems include a complete line of . . . Calling Stations, Annunciators, Paging Systems and In-and-Out Registers for Hospitals, Department Stores, etc. Cannon also manufactures Experimental Switchboards, Sectional Terminals, Multi-contact Electrical Plugs and Receptacles.

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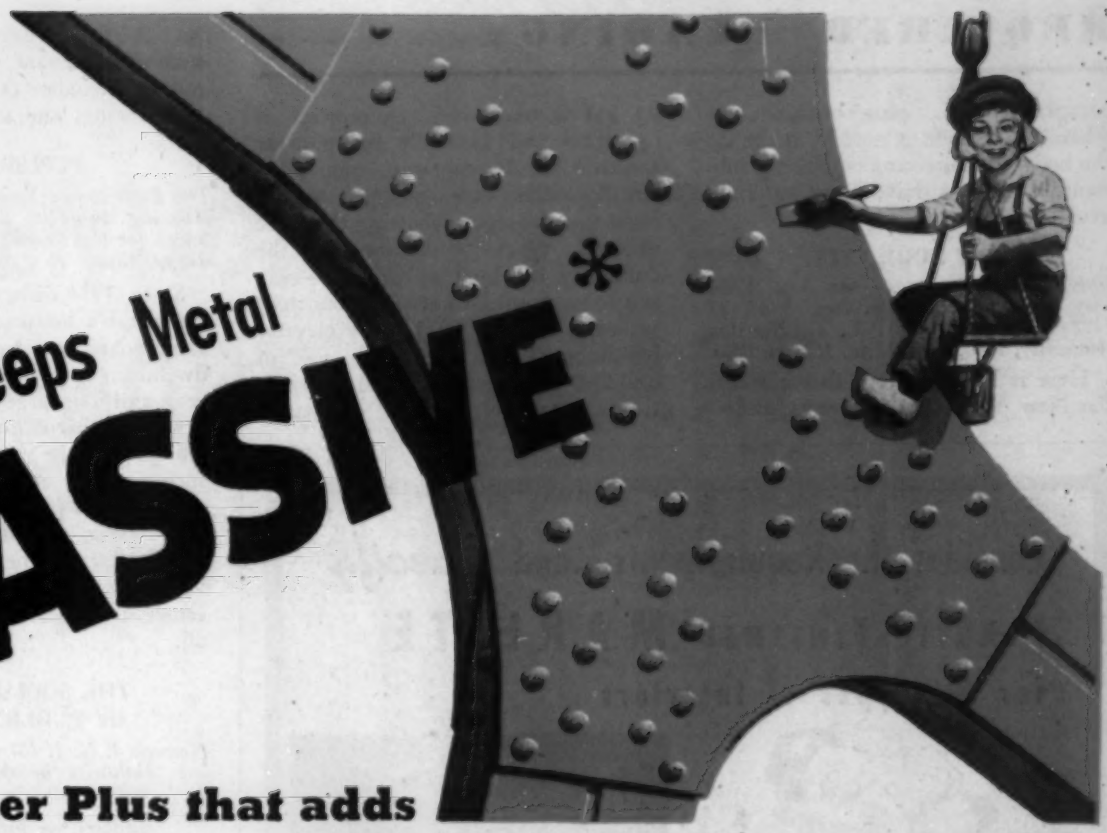
Write for latest bulletin. Address Department A-312

CANNON ELECTRIC

CANNON ELECTRIC DEVELOPMENT COMPANY, LOS ANGELES 31, CALIF.

MANUFACTURING SIGNAL ENGINEERS



Keeps Metal PASSIVE

...another Plus that adds to RED LEAD'S Extra Rust Protection...

There is no question about Red Lead's acceptance throughout industry as the standard priming paint for *making metal LAST*.

One important reason is its ability to keep metal surfaces in a "passive" or rust-inhibiting state. Authorities agree that metal protective paint should be rust-inhibitive to give satisfactory performance.

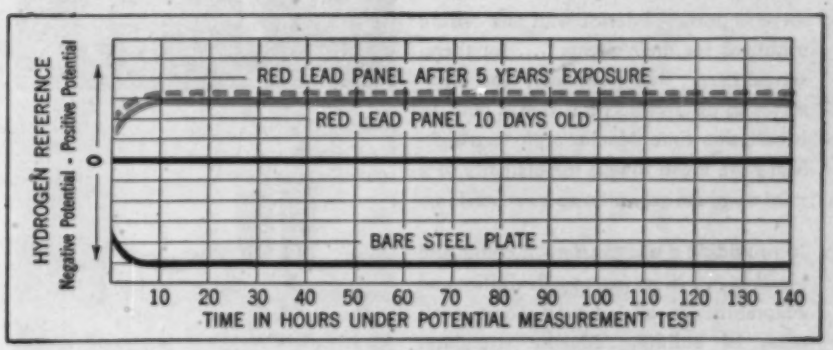
Time-potential curves, such as the one at right, are used to express rust-inhibitive properties of paint and thus indicate its effectiveness of protection. They show the effect of Red Lead on the potential of steel in the presence of moisture or water.

For example, a steel panel whose potential is *positive*, relative to hydrogen, is considered to be in a passive or non-corroding state. A negative potential indicates corrosion activity or rusting. The graph shows clearly the rust-inhibitive effect of Red Lead paint on steel as contrasted with the rapid and continuous rusting of unpainted steel.

Note that in this test a Red Lead paint film which had weathered 5 years was just as effective in preventing rust as one which had dried for only 10 days.

Specify RED LEAD for All Metal Protective Paints

The value of Red Lead as a rust preventive is most fully realized in a paint where it is the only pigment used. However, its rust-resistant properties are so pronounced that it also improves any multiple pigment paint. No matter what price you pay, you'll get a better metal paint if it contains Red Lead.


HYDROGEN REFERENCE
Negative Potential - Positive Potential
0
RED LEAD PANEL AFTER 5 YEARS' EXPOSURE
RED LEAD PANEL 10 DAYS OLD
BARE STEEL PLATE
10 20 30 40 50 60 70 80 90 100 110 120 130 140
TIME IN HOURS UNDER POTENTIAL MEASUREMENT TEST

*Proof That Red Lead Keeps Metal Passive

In the above test a piece of unpainted steel was immersed in water. Iron, going into solution, reacted with oxygen in the water to form rust. This unrestrained corroding state is indicated by a rapidly developed and maintained negative potential (see above graph). However, when steel panels painted with Red Lead were immersed under the same conditions, ferric and lead salts formed directly next to the metal. This action at once stifled corrosion by preventing the iron from going into solution, thus keeping the steel surface passive. The result is shown in the graph curves above, where a quickly rising positive potential remains constant throughout the test.

Write for New Booklet—"*Red Lead in Corrosion Resistant Paints*" is an up-to-date, authoritative guide for those responsible for specifying and formulating paint for structural iron and steel. It describes in detail the scientific reasons why Red Lead gives superior protection. It also includes typical specification formulas ... ranging from Red Lead–Linseed Oil paints to Red Lead–Mixed Pigment–Varnish types. If you haven't received your copy, address nearest branch listed at right.

All types of metal-protective paints are constantly being tested under all conditions at National Lead's many proving grounds. The benefit of our extensive experience with Red Lead paints for both underwater and atmospheric use is available through our technical staff.

NATIONAL LEAD COMPANY: New York 6, Buffalo 3, Chicago 80, Cincinnati 3, Cleveland 13, St. Louis 1, San Francisco 10, Boston 6 (National-Boston Lead Co.); Pittsburgh 30 (National Lead & Oil Co. of Penna.); Philadelphia 7 (John T. Lewis & Bros. Co.); Charleston 25, W. Va. (Evans Lead Division).

DUTCH BOY RED LEAD

REQUIRED READING (Continued from page 136)

paragraphs, etc., plus notations of where clarification is needed, make up the body of the recommendations; substantive changes have been carefully avoided.

NEW YORK CITY

10th Annual Report of the New York City Housing Authority. New York 17 (122 E. 42nd St.), N. Y. C. Housing Authority, 1945. 9 by 12 in. 122 pp. illus.

Here is the history to date of what the New York City Housing Authority has accomplished: 14 projects in operation and 13 ready for postwar construction. Photographs, plot plans and floor plans of each project are included in the report, showing the three different types of community the Authority has built or planned—two-story row houses, three- and four-story walkups, and six- to 13-story elevator buildings. Tables show the cost of building and operating, and give statistics as to land coverage, occupancy, etc. A brief introduction explains methods of tenant selection, operation and maintenance of projects, methods of financing, and so on.

PITTSBURGH

The First Seven Years. A Report of the Housing Authority of the City of Pittsburgh for the Years 1937-1944. 7 by 10 in. 63 pp. illus.

Since 1934, when 40 per cent of Pittsburgh's housing was found to be substandard, an average of 500 unfit dwellings have been demolished each year, and four large low-rent communities have been built. The Housing Authority quite properly is proud of such a record of accomplishment, but, as this report points out, much remains to be done, and it will take concentrated effort on the part of the private builder as well as the municipal government to provide decent housing for all.

THE SOCIAL EFFECTS OF PUBLIC HOUSING

Newark 4, N. J. (57 Sussex Ave.), Housing Authority of the City of Newark, 1945. 8¼ by 10½ in. 95 pp. illus.

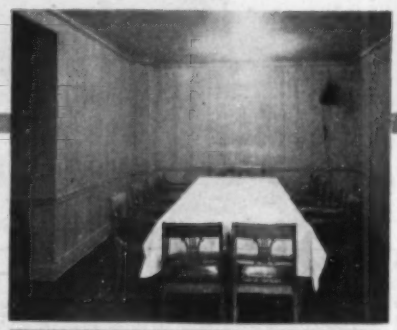
Conducted by Dr. Jay Rumney, professor of sociology, University of

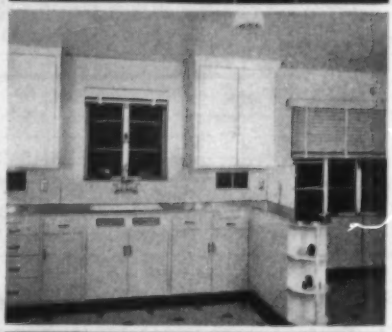
(Continued on page 158)

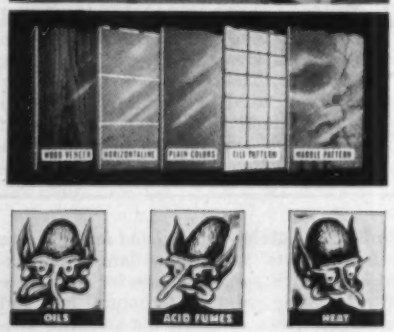
Consider the Requirements...and *Specify*

PLASTIC-FINISHED MARLITE

for All Types of Interiors







Leading architects depend on Marlite to solve important interior wall and ceiling problems for their clients . . . for themselves. Large, wall size panels lend themselves to all architectural trends and cut installation time. Marlite's pioneer high-heat-bake finish lowers maintenance to a minimum, entirely eliminates refinishing.

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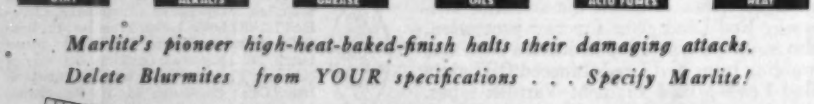

Marlite's pioneer high-heat-baked-finish halts their damaging attacks.
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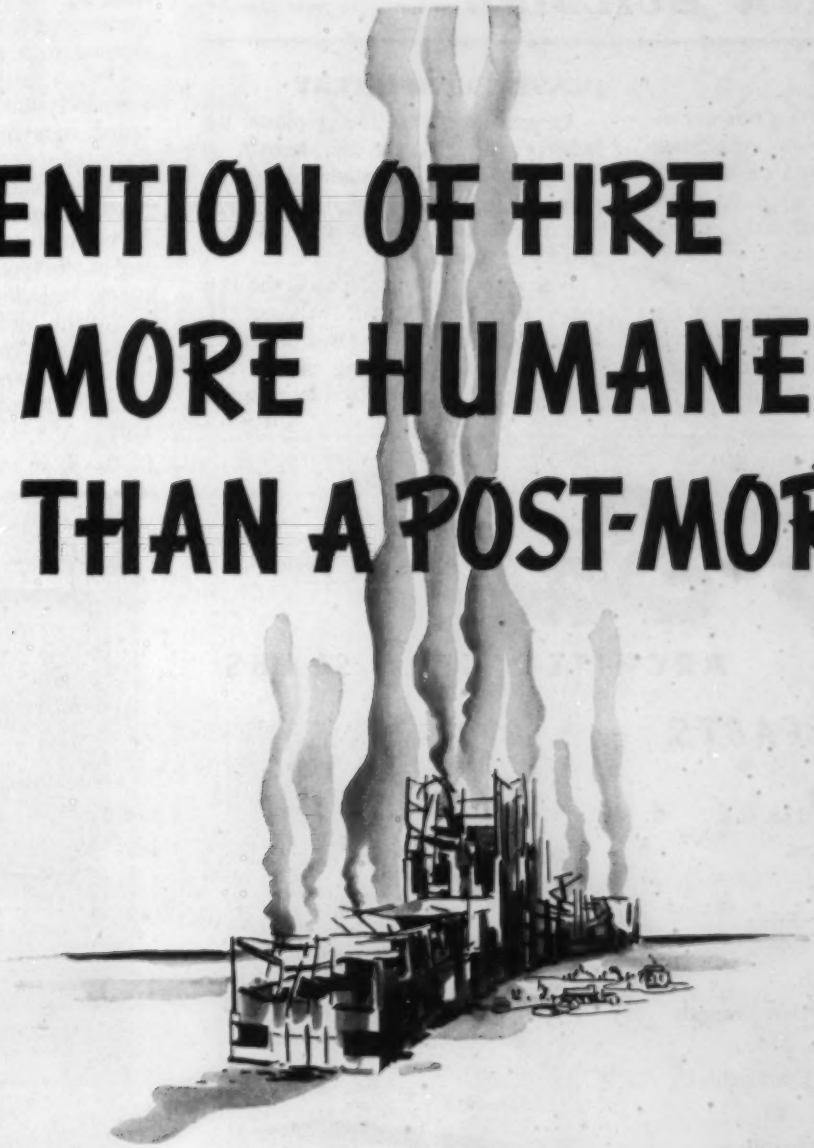
ARCHITECTURAL DESIGNER AND DRAFTSMAN: Work consists of churches, schools and hospitals. Office location, small town near Chicago. Future connection for right party. State full particulars, and salary expected.
Box 56, ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

PREVENTION OF FIRE IS MORE HUMANE THAN A POST-MORTEM



A "POST-MORTEM" into the cause of a fire is a little late from the point of view of fire *prevention*. It may disclose why a simple, local blaze became a major disaster . . . but it can't explain away the heap of blackened rubble or bring back the dead.

A MODERN HOSPITAL may be built of so-called "fireproof" construction. But this will *not* insure freedom from fire hazards. The supplies, equipment and furnishings of a hospital are hazards themselves. There is also human negligence with which to contend. Control the fire at *its source* and these hazards are reduced to a minimum!

ONLY AUTOMATIC SPRINKLER FIRE PROTECTION will do this! Instantaneous and positive in action, a Grinnell Automatic Sprinkler System will safeguard helpless patients anywhere in the building – night and day! It will bear the burden of your responsibility for lives and property . . . will end the menace from fire permanently!

THIS "TAILORED-TO-FIT" system can be installed quickly, with little inconvenience to personnel and hospital routine in buildings now unprotected by a sprinkler system. Your nearby Grinnell office will supply complete information without obligation. Grinnell Co., Inc., Executive Offices, Providence 1, R. I. Branch offices in principal cities of U. S. and Canada.

GRINNELL

AUTOMATIC SPRINKLER FIRE PROTECTION

DEVOTED TO THE DEVELOPMENT OF AUTOMATIC FIRE PROTECTION SINCE 1873 . . . PROTECTING OVER FIFTY BILLION DOLLARS WORTH OF THE WORLD'S PROPERTY

 (Continued from page 24)

ultraviolet rays of the sun.

Hornlume comes in a double container, pigment in the top, vehicle in the bottom, to be mixed on the job. Though the two ingredients are brushed on at one time, some separation takes place when the law of specific gravity works: the asphalt sinks down, leaving the aluminum at the top of the coating to reflect the sun's rays. A. C. Horn Co., 43-36 10th St., Long Island City, N. Y.

PLASTIC UPHOLSTERY

An extensive new line of plastic upholstery for civilian use, known as *Naugahyde,* will be made in a wide range of light and bright, clear colors and two-tone effects as well as in a variety of grains.

Waterproof and flameproof, the new material, it is claimed, will not get hard or crack, and will resist edgewear, abrasion, scuffing, flexing and wrinkling. It will not be affected by perspiration, salt water, alcohol, gasoline, oils, greases, most acids and alkalis; can be cleaned with soap and water.

Over a million yards of the plastic upholstery have been made for war and tested in severe military applications, the manufacturers report. In January, 1943 the material was adopted by the Navy as mandatory equipment for all Navy combat ships. It is used for seating in all types of motorized war equipment, including combat tanks, trucks and jeeps, and for turret and wall lining and seat covering in bombers, fighters and transport planes. U. S. Rubber Co., Rockefeller Center, New York City.

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Exposed Aggregate Finish.
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Salt Lake City, Utah.....Otto Buehner & Company.....640 Wilmington Ave.

MO-SAI ASSOCIATES, founded to standardize and improve architectural slabs.
The registered trade mark "Mo-Sai" is the property of the Dextone Co.

Bathroom cabinet of one-piece steel

BATHROOM CABINET

In a new line of bathroom cabinets most of the cabinet bodies are of drawn, one-piece steel construction, with rounded corners, and finished in either vitreous porcelain or baked enamel. Mirrors are available in various grades of glass and can be furnished plain, or with a one-piece stainless steel or chromium plated frame. Both recessed and wall surface types and electrically lighted cabinets are included. The Grote Mfg. Co., Inc., Bellevue, Ky.

PHOTO DRYER

A new *B-8 Photo Dryer* operates with additional electrical heating elements said to assure maintenance of even heat. Dries matte or semi-matte or glossy prints, blueprints and black and white prints. Thermostatic control available. Variable speed drive motors and controllers to permit instantaneous

(Continued on page 154)

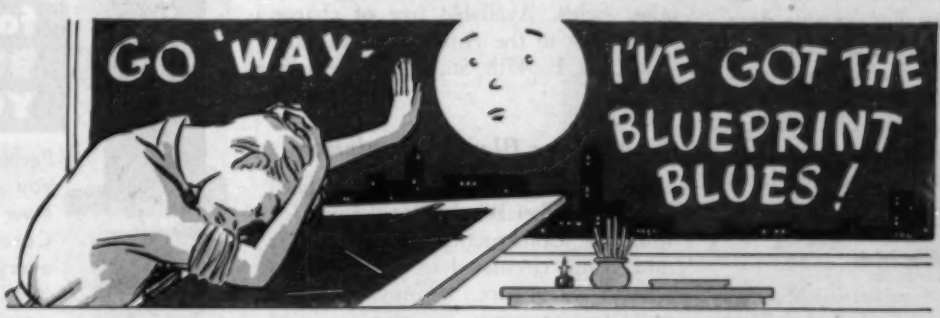
J&L JUNIOR CHANNELS AND JAL-TREAD

STEP UP STRENGTH AND SAFETY

The light-weight strength of J&L Junior Channels — the safe, sure footing of Jal-Tread, J&L's new rolled-steel checker floor plate — Controlled Quality Steel in a practical application.

J&L STEEL

JONES & LAUGHLIN STEEL CORPORATION
PITTSBURGH 30, PENNSYLVANIA



Well, Bill, so long as you use drawing pencils with soft, crumbling leads, you'll get smudged drawings and bad blueprints. Treat yourself to the pencils that never crumble, that produce clean, dense, opaque lines every time. Get Typhonite Eldorado!

These great pencils are unerringly uniform in every degree. Drawings made with Eldorados result in blueprints as clear as a bell and a pleasure to read. We'll send you a free Comparison Sample, Bill. Request it on your business or professional stationery, specifying degree.

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ANCHOR FENCE

Nation-Wide Sales and Erecting Service

FOR BETTER BUILDING

(Continued from page 152)

speed changes over a range of 6 in. to 3½ ft. a minute. A chromium plated copper drum that finishes photos with high glossy surface is included. Pressed steel framework. Two sizes available: 26-in. and 44-in. widths. Peck and Harvey, 4327 Addison St., Chicago 41.

FIBERGLAS ERASER

A new fiberglas refillable eraser is said to be excellent for erasing India ink from tracing cloth and for cleaning drafting instruments without scratching. Called the *Rush-FybRglass-Eraser*, it comes in an attractive, pencil-shaped plastic case and is unconditionally guaranteed "for life." The Eraser Co., Inc., 231 W. Water St., Syracuse 2, N. Y.

STANDARDS

A.S.A. Price List

A new list of all American Standards and War Standards approved to date has just been published by the American Standards Association. Approximately 800 standards are listed, covering specifications for materials, methods of tests, dimensions, definitions of technical terms, procedures, etc. in the electrical, mechanical, building and other fields. Available free of charge on request to the American Standards Assn., 70 E. 45th St., New York 17, N. Y.

Wood Fiber Blanket Insulation

Recommended Commercial Standard for Wood Fiber Blanket Insulation (for Building Construction), TS-3955, is now being circulated to the trade for written acceptance. It provides minimum requirements for one grade of wood fiber blanket insulation ranging from ½ to 3 in. in thickness as made for building construction. It covers physical requirements and tests for thermal conductivity, density, flexibility and fire resistance, and sets forth methods of sampling, packing and labeling.

Structural Design for Lumber

A comprehensive standard for engineering design with lumber is now provided by a national specification published by the National Lumber Manufacturers Association.

The specification applies to stress-grade lumber and its fastenings when the lumber is properly identified as to grade. The provisions are suitable for inclusion in building codes. Copies may be secured from the National Lumber Manufacturers Assn., 1319 18th St., N.W., Washington 6, D. C., for 25 cents each.

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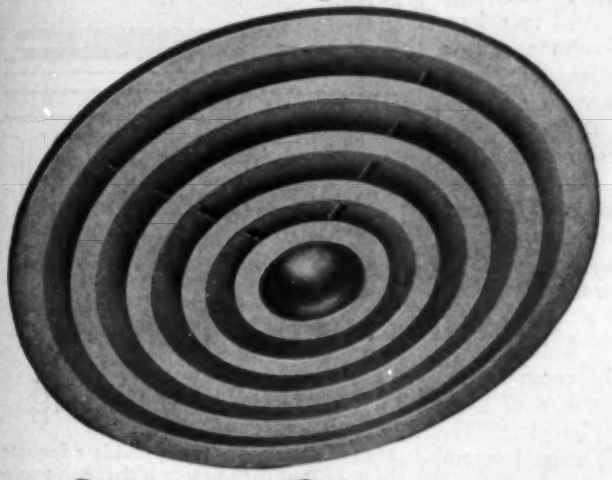
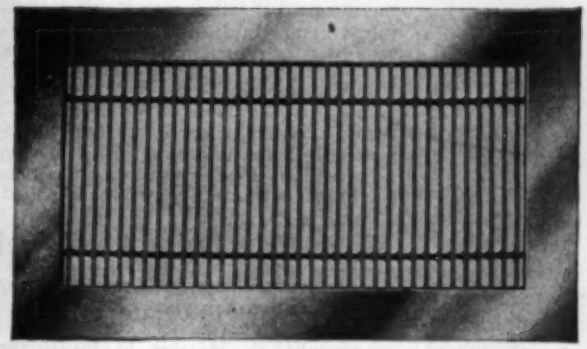


AEROFUSE OUTLET



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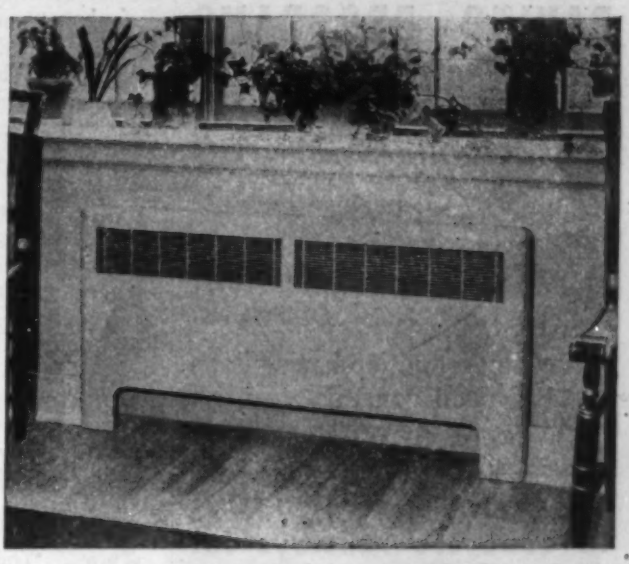

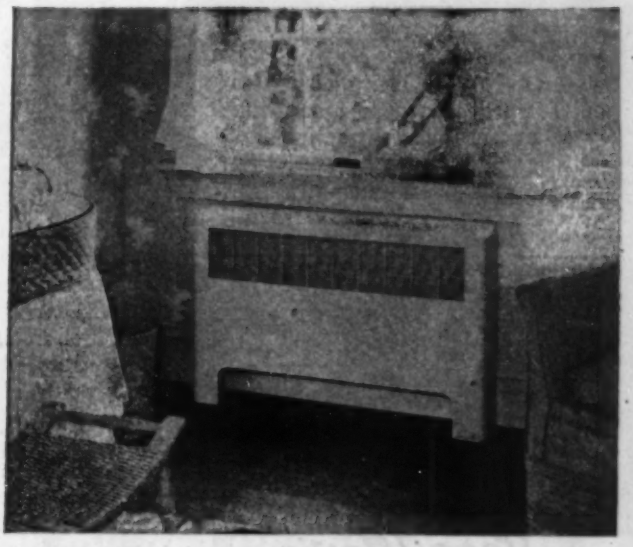

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LETTERS

(Continued from page 28)

the earth that new seeds may sprout, and other forms, transient though they be (and fortunately at those times they are very transient), come into being.

And there are those architects who are versed in the meaning of life and its purpose. They bide their time and work in silence. They see through the passing phantasmagoria of temporal phenomena. "Curiouser and curiouser," they say with Alice, as they package their tin houses for swift delivery to panting customers. Meanwhile, if they are not at all times allowed to give the best of themselves, at least they learn a lot of things. And they have not forgotten that the substances have their ways and qualities, that light, and proportion, still have the same old meaning. These are the stuff with which not only "homes" are built, but the language through which the everlasting truths are spoken. We must bide our time. The wheel turns.

Yours sincerely,
Antonin Raymond

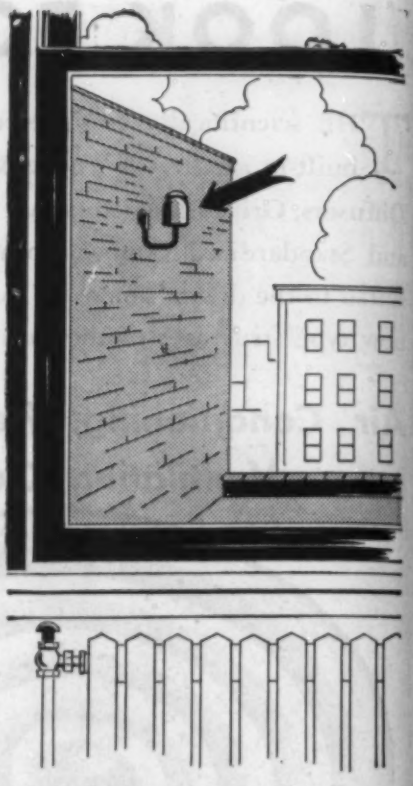
RECORD:

The RECORD is to be congratulated upon the timely presentation of Dean Hudnut's provocative article, "The Post-Modern House." The next several years will probably see a greater variety and quantity of houses erected than at any similar period in our history. It behooves us all to employ our fullest efforts toward the development and fruition of a sincere and eloquent period of architecture. . . .

I presume there are some architects who would object to being called an artist—I would be pleased to be so addressed. Certainly there is more to architecture than the precise arrangement of planes to encompass certain areas. However, while harkening to Dean Hudnut's plea for more art and less engineering, we must guard against extremes. We do not want to imitate the automobile industry, which, when production ceased at the onset of this war, was covering its cars with chromium excrescences with the excuse that the public demanded them. We do not want to return to the products of the Victorian era.

"We must remember that techniques have no inherent values as elements of expression; their competence lies in the way we use them." Here, in one sentence is expressed the substance of Dean Hudnut's essay. This concise statement could well be the guiding light for all who practice "Modern" architecture.

Very truly yours,
Charles W. Lorenz



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Seven out of ten large buildings in America (many less than ten years old) can get up to 33 per cent more heat out of the fuel consumed! . . . Heating Engineers surveyed thousands of buildings to give owners an accurate estimate of the savings to be achieved with proper controls.

If you're planning on a new building, or modernizing an existing one, write for "Performance Facts". Address Dept. AR-8.

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